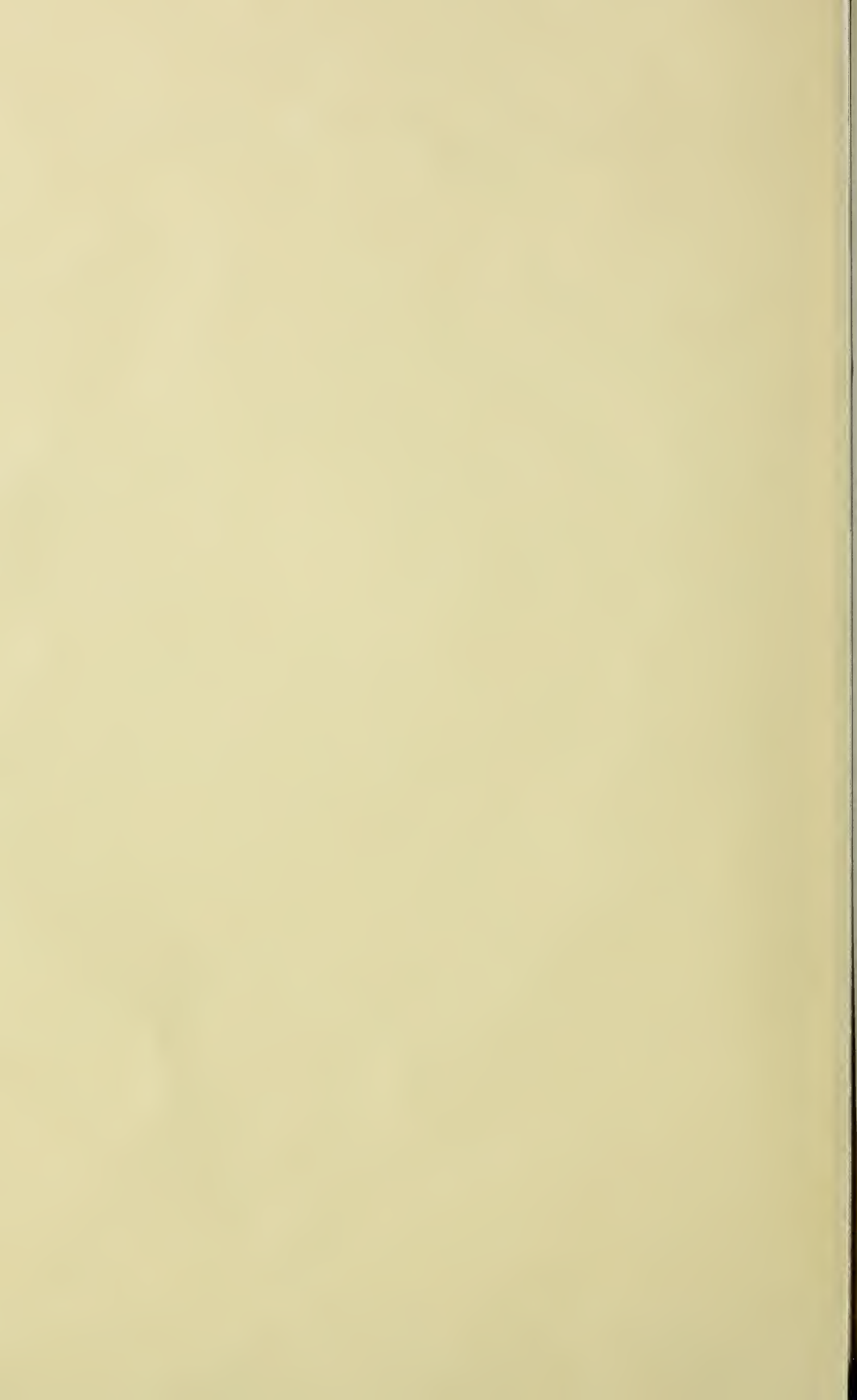


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THE 129 MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

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No. 5.

STORING GREEN FORAGE IN PITS.

In our April issue, we published a letter from our lady correspondent, in Dijon, France, in which the practice of burying in pits, green corn, the leaves of beets, &c., all in a succulent state, was described. It was stated that the practice prevailed both in the north and the south of France, and that it is becoming quite general and popular.

We, however, notwithstanding the statement that the system of preserving green forage in the manner described, is satisfactory to French yeomanry, concluded that it had one or two very objectionable characteristics.

We allude to the liberal use of "salt" in the pits, and the recommendation to incorporate those portions of the fermented mass which had advanced to that degree, that it had become black and soft, with the blanched portion of it, in the interior of the pits; thus compelling animals to eat vegetable matter which was evidently in a condition to be better adapted as plant, than animal food. We do not object to, on the contrary, we recommend chopping, moistening and fermenting, to a degree that high heat shall be generated; especially if fed in cold weather. Our readers will doubtless recollect, that we recently recommended chopping corn fodder some days in advance of its being required, and allowing it to lie in bulk, and heat to 150 or 180 degrees—and that we stated that heat generated naturally, in the process of fermentation, was equivalent to that produced by steaming, so far as it extended. We have practiced this system for years, and found it very economical.

We are opposed to compelling animals to eat putrid food, whether disguised by mixing with that which is sweet and palatable, or otherwise forced upon them.

Forage in the first stage of fermentation is not injured, or rendered unpalatable, on the contrary, it is better relished, especially, after animals become habituated to it, than in a harsh, dry, unfer-

mented state; it is also more readily masticated, digested and assimilated than when fed in a natural state.

There is great economy in fermenting corn stalks, straw and coarse hay before it is steamed, as less steaming is required, and its absorbing capacity is greatly augmented.

For those who have no facilities for steaming forage, well advanced and judicious fermentation will be found an excellent substitute.

We have frequently stated, we are opposed to feeding any domestic animal salt in their food. We insist that it should be placed where it will be accessible at all times, and they will instinctively eat all that they require, and no more.

In Hungary and Germany, also in other countries on the other continent, the pulp of beets, from which the juice has been expressed for making sugar, is buried in pits in the ground, and it is stated that no salt is used in the pit, and that it will keep fresh and sweet for a period of five or six years.

Very erroneous views are entertained by many persons, with reference to the preservative power of a small quantity of salt mixed with various kinds of food, both human and brute.

Many suppose that an ounce of salt to a pound of butter will preserve it; whilst experiments with butter exposed to a high temperature, for a great length of time, entirely without salt, have proved that it will keep as well as that having in it the quantity above named.

The same is true in storing hay; the opinion is very prevalent, that a gallon of salt to the ton, will preserve hay that would not keep in the mow or stack unsalted. This is not our experience, but it is our experience that portions of hay on which salt is applied in storing it, is apt to become over salted, and animals are compelled to eat overdoses, which creates unnatural and excessive thirst, to allay which excessive draughts of ice cold water will so chill the system, that its normal condition is not restored for a long time, occasion-

ing loss, and severe loss, all chargeable to this injudicious use of salt.

In endeavoring to analogously establish the fact that if beet pulp will keep thus, the leaves of the beet and of other esculent roots, and green corn fodder should also keep, we do not feel sanguine, that such analogical reasoning is reliable. The sugar and the water has both been largely extracted from the pulp, but it is not stated to what extent, and these are known to promote fermentation; whilst the leaves of the roots and the stalks are in a natural green state.

We hope that some of our enterprising dairymen will experiment with this process of storing green forage for use next winter; and if Farmers' Clubs would take up the subject, and select several who will each conduct their experiments differently, e. g., some with, and others without salt—some in small and others in large bulks—some to cover with earth deeply, others shallow, &c., we shall be able in a single season to learn much about this new subject.

It will, if found practicable, save much corn fodder, which is destroyed by frost every autumn, and particularly for those in the winter dairy business, it will be invaluable.

The dimensions of the pits used for beet pulp, are usually four to five feet in depth, eight to ten feet in width, and of indefinite length. We would not recommend to make the area of a cross section so great as that above named.

Home Manure and Commercial Fertilizers.

The advance sheets of the Monthly Report of the U. S. Agricultural Department, have been received and require special notice, because it is of the deepest interest to the farming community. It seems that the March circulars sent to the statistical corps, representing 1612 counties in the Union, contained several questions as to the modes of soil-fertilization, together with the proportions of farm-yard manures and manufactured fertilizers used in the process of growing crops, and increasing the fertility of the soil. To these questions answers have so far been received from 1096 counties, and the Department Statistician has prepared a table, representing the average of the returns of each State. From this we learn that South Carolina uses the largest amount (74 per cent.) of fertilizers, and the smallest of barnyard manures, only 26 per cent. Georgia comes next, and Maryland uses for these purposes only 40 per cent. of home manure to 60 per cent. of fertilizers or manipulated and purchased manure.

"The investigation demonstrates the fact that

farmers are learning the necessity of increasing the store of plant-food in the soil, of having it in an immediately available form, and of supplementing notable deficiencies with specific fertilizers. They are becoming better versed in the philosophy of fertilization, and better able to adapt their practice to the peculiarities of their soils, and to their local resources in material for fertilization, both by an increase in theoretical or scientific knowledge and in experience gained in successful application of such acquirement."

"The manure of farm-animals is seen to be the main reliance for sustaining fertility. Commercial fertilizers—organic and mineral—are somewhat in use in New England, especially in Maine and Massachusetts, including quantities of fish-refuse and sea-weed. They are also used sparingly in the Middle States; but the cheaper minerals, lime and plaster, and still cheaper green-manuring, monopolize a large proportion of the percentages credited to "other fertilizers." The South Atlantic States from Maryland to Georgia, inclusive, use not only the largest proportion of manipulated fertilizers, but the largest quantity in comparison with other sections. The cost of such material amounts to millions in each of these States. Little fertilizing matter is applied to the soil from Alabama westward, with the single exception of such quantities of cotton-seed as are not required for seeding and for a few oil-mills. In the eastern portion of the Ohio Valley experiments are tried with commercial fertilizers by a few progressive farmers, and the use of clover as a fertilizer is considerably practiced there by immigrants from Maryland and Pennsylvania. And here we may stop. The remainder of the country has heretofore practiced the draining of farm-yard manures into creeks and rivers, or the removal of barns from their inconvenient accumulations; or, if they all have not literally adopted this practice, they have not indicated much faith in the necessity of manuring. And yet these returns show that the lands of Iowa and Minnesota, and even of Illinois, are made to bear an increase of 20 to 30 per cent. by a single experiment in green-manuring. Thoughtful western farmers are seriously pondering the economy and profit of prairie-land fertilization."

This interesting report closes with the following summary as the results of this extensive investigation.

"This investigation presents prominently three suggestive points: First, the use of fertilizers is becoming more general and more discriminating; second, few, if any, soils in the country are so rich that they cannot be made more productive by judicious fertilization; third, farm-yard manures are the best for general use; green-manuring is the cheapest means of soil renovation, and commercial fertilizers are useful for quick results and for specific purposes."

As an illustration of the immense bovine resources of Texas, it is stated that one breeder there boasts that he will have 75,000 calves to brand this season. He says that he branded 63,000 last year, and 70,000 the year preceding. Compare this with a New-England barn yard, with its two cows and yoke of oxen.

*Agricultural Calendar.***FARM WORK FOR MAY.**

The very busy time for the farmer or planter has begun. Much is to be done, and if the weather be favorable, much can be done during the pleasant and lengthening days. We suppose that the accumulations of manure in the stables, under sheep shelters, stables, the hog pens, and the barn yard, have been hauled out and spread as top-dressing, according to the advice of the best practical and theoretical farmers. We are in hopes that you have spread stone or oyster shell lime where it was needed, and that you have gone to the utmost length of your tether in money or credit, or both, to supply yourselves with fertilizers suitable to your respective crops. You have, also, we expect, sowed your clover and other grass seeds, and that they are up and growing.

TOBACCO.

Keep the tobacco beds clean of grass and weeds. Thin the plants by raking with the tomato rake. Top dress often with a sharp sprinkling of well pulverized stable manure, ashes and plaster, in equal parts, and a little guano or soot, may be added, if you have them. If you use guano, say, one-tenth of the mixture, you ought to leave out the ashes. The last are safer and better, provided guano was sown when the beds were made. Some persons sow charcoal dust over the beds, to make the ground black, that the heat of the sun will be attracted, and rendered more effectual in promoting the growth of the plants; and with the charcoal dust, may be mixed soot and sulphur, to drive off the destructive fly. The market for this crop is advancing in prices.

CORN.

Plant corn as early as possible, after the method of cultivation suggested in the April number of this journal. Be sure and plant sound seed of a prolific variety. Soak it well in copperas and salt-petre, and some tar, dissolved in hot water, and poured directly over the corn; roll it after 24 or 36 hours soaking, in plaster. Use salt freely on the hills, or along the drills, after planting, and you will be most likely protected from the cut-worm and birds. Salt is death to the worm, and tar is disagreeable to the crow and black birds, both of which birds are very destructive at this season, providing delicate food for their young.—They must have food, and will rob if they can get it no other way, hence, it is not unwise to sow corn around the field, and along the balks which divide the fields into "cuts" or subdivisions. They will be satisfied with this provision, and not pull up

the corn, for, like most men, they will get their grub the easiest way, and at the least expense of labor.

POTATOES.

Plant your potatoes as early as possible, on deep plowed, well pulverized land, and put a plenty of rich stable manure in the drill or hill, and sprinkle plaster and ashes, in equal portions, on the manure, or on the drill or hill, after the potatoes are covered over. After they begin to peep above ground, harrow both ways—then use a small plow, and "bar" each side of the rows, follow, in a day or two with the double shovel twice in a row, so as to throw the earth back to and around the plants.—In 10 days time, use a cultivator or shovel plow; or, if necessary, the hoe, to destroy all grass or weeds; when the vine shows symptoms of blossoming, then plow with a one horse plow, giving a flat hill to the potatoe. After this, hand weed, if it be necessary, and with this little labor, your valuable crop of potatoes is made. Should the Colorado pest appear, use Paris green at once, but use it carefully, according to the directions you will get from the dealer, as it is nearly as dangerous to man as to the bug.

CLOVER AND PASTURES.

In many sections clover will be in full bloom at the end of this month. Be sure and cut it for hay, as soon as a few heads begin to turn brown. As soon as the hay is removed, plaster it, and, if possible, save the next crop for seed. With proper implements, you can, with not much trouble, save your own seed, and enough over, to pay expenses. If possible, several should join and hire a clover hulling and cleaning machine. Clover seed is a profitable crop. Do not, if you can help it, turn your stock on your pasture field, until the clover is nearly or quite in blossom, and the other grasses well up.

PUMPKINS.

Be sure and plant among the corn in the richest parts and low grounds, a plenty of pumpkin seed one or two seeds in every fourth or fifth hill, and every third row of corn—or if drill corn, plant the seed between the corn plants, every 16 or 20 feet in every third row or drill. They are too valuable, and cost no labor in this way to grow them, for any farmer, who has cows or hogs, to neglect having a large crop.

MILLET.

Do not neglect to sow some acres in millet, if you have any rich vacant land not otherwise appropriated. We have so often descanted on the advantages and mode of culture of this valuable forage crop, that we decline saying more at this time than to give this simple reminder.

SWEET POTATOES.

Be sure and not to omit planting an acre or more of this important and highly popular esculent.

STOCK OF ALL KINDS.

Feed and groom well working beasts. Give your cows that have calves, good food. Let the colts have a bite of green grass, and the calves and lambs also; if you have no small lot for them, let them a few hours a day on the young clover. Soiling, however, would be the better plan until the clover gets up high enough to be pastured,

ORCHARD.

Paint the bodies of the trees from the roots to the large limbs, and as high up as you can reach, with a mixture, in the proportion of 1 quart soft soap, 1 quart unleached ashes, and 1 pint of salt, diluted with water, to the consistency of thick white-wash, and apply with the white-wash brush. If the trees are mossy, or have much dead bark on, scrape it off with an old dull hoe, or hard hickory broom.

SOILING.

Sow an acre of corn on highly manured land, near your barn, three bushels of corn broadcast, harrow it in, both ways with some fertilizer, and you will soon have rich cutting for soiling your cows at night. Provide in the newly cleaned out barn yard a supply of straw, rubbish, leaves and muck, on which spread the stable manure as it accumulates, dust weekly with plaster and fill the racks with corn stalks as soon as they get 18 to 24 conveniently. You thus increase the milk, add to inches high, also clover, &c., as you find it comes in to the comfort of the cows during the "turkey rains" and those May cold, windy storms, known by different titles in various localities, but certain to come as taxes and death.

ROOTS, SUGAR BEET AND MANGOLDS.

It is hoped you have had your ground well manured and deeply plowed and put in good order. Now sow 250 lbs. of a good superphosphate, harrow it in, run lists with a single horse plow, 3 feet apart and drill in Sugar Beet and Mangolds on the top of the drill, then run a hand roller over the top of the drill, and on its track spread equal parts of plaster, salt and ashes or fine bone dust, at about the rate of 20 bushels per acre of the mixture; when the plants get a fair size, say 6 inches high, thin to 6 inches apart, and those pulled up transplant into missing places and put in another bed, trimming the tops. This is to be done during a wet or moist spell. They transplant well. The importance of a good root crop is incalculable to the grazier, or dairyman—it is green food, rich food, milk produ-

cing food, an aid to digestion, wholesome and refreshing to all animals confined by the rigors of frost, to dry feed. The day has past when a man can be found to ridicule or denounce root culture on any farm, let its speciality be what it may.—Every man wants rich milk and good butter in winter, and calves and sheep and hogs kept at the lowest cost, and kept in high condition.

Nothing will accomplish this so much or so well as a good supply of roots, aided by a little Indian meal, or mill feed and oil cake.

Prepare by manuring and deep plowing some ground for Ruta Baga, to be ready to receive the seed at the proper time, which will be about the 20th, of next month. Remember this root has made England the banner nation of the world for sheep, and has revolutionized her agricultural system and placed her next to her young daughter, the United States of America, the greatest agricultural nation in the world. France and other nations may exceed her in certain specialties, but in renovating worn out soils and in the production of human food in the shape of meats she is Queen of agriculture as she is Mistress of the seas. She has done it by *turnips and sheep* chiefly.

While we exceed every nation in the variety and amount of our productions we are importing wool to clothe ourselves. Shame! But the reason is plain, England has a dog-law tax, which yields a large revenue, and we have a multitude of unlicensed dogs and freed men, that are not only fond of sheep, but not subject to control, being under the protection of politicians and the strong arm of the General Government. Let not this deter you, but increase your root crops and increase your flocks, and thereby increase your incomes and the fertility of your soils, taking care to use strichnine and fat meat abundantly for the dogs, and a watch with powder and ball for rouges, and in a short period of time we will be exporters and not importers of wool, and our people will become mutton and lamb eaters, because they like the English, will have good mutton or lamb furnished instead of the miserable stuff they now get, after all the fat and juices have been run off them by the dogs and their co-adjutors, and become as full of muscle and hard, tough gristle and flesh as a racer is when he has finished a hard training for four mile heats.

We never have designed these notes of farm work to be simple reminders of what is to be done, but as short essays on the culture of various products, with our concise reasons for what we write in reference to the suggestions we make, hence it is with some confidence we ask our readers to read and consider our Monthly Calendars of Work on the Farm, and should any one find fault or differ in

opinion, let us have his reasons and we will give him a respectful hearing and answer. We are aware, we are far from infallible. Interchange of opinions on these subjects always leads to favorable results, hence we do hope to hear from practical, sensible men on all subjects connected with agriculture. We like to be questioned and are ever ready to do our very best to give answers satisfactory.

TOMATOES.

The field culture of this valuable plant has become common, and owing to the greatly increasing demand for immediate use by every householder, the demand fully equals the supply, therefore, must be remunerative to the grower.

The best system pursued in field culture is, after the plants are three inches high, they are thinned, and those pulled up are transplanted, as we recommended in our hints for this month about garden work.

After the middle of May up to the 20th of June, set the plants in the field, on good, well prepared land; light soil, or even gravelly soil, is suitable to the tomato. Run furrows four inches deep, in these put rich stable manure, and cover it with back-furrows of a small plow, just as if potatoes were planted. If there is a want of farm yard manure, let the furrows be only two inches deep, and sow some fertilizer that has in it a large proportion of fine ground bones dissolved in acid. The rows should be 4 feet apart, and the plants 3 feet apart in the rows. As they grow sprinkle plaster over them. Cultivate often with cultivator, hoe and shovel plow; at each working draw a little earth to the plants, until they get so high that they begin to fall over. At this stage, they begin to blossom, and should be let alone after having a good sized flat hill made around the plants, with the hoe or small plow. Should the Colorado bug attack them, use Paris Green, but be cautious and follow the proper directions for its use, as it is a poison.

NUTRITIVE VALUE OF HAY.—The Journal of Chemistry says, in answer to a correspondent:—"You do not fully realize the great difference in the nutritive value of different kinds of hay. Hay of the same variety of grasses grown on different fields will vary widely in its nutritive value. In some trials made at the farm, it has been found that the herd of cows fed on upland hay, grown on a certain plot of land, fell off one quart each in yield of milk, in twelve hours. When changed to hay of nearly the same varieties grown in another field, the full quantity was restored, in about the same number of hours. Land capable of growing heavy crops does not produce grass of such value as that not in so high tilth."

GARDEN WORK.

GARDEN WORK FOR MAY.

This is an interesting and important work for both the Amateur and Market Gardener. It is emphatically *the* month in which the market gardener sets out his chief crops, such as cabbage, potatoes for winter, corn, early celery, tomato, egg-plant, lima beans, melons, &c. He therefore must be on the alert.

Beans.—Bush or Snaps, sow at intervals for a succession. The German Wax, either or both white or black seeded. They are tender and stringless, when the pods are yellow as beeswax.—Plant pole beans, the giant wax, similar to the wax-bush only a runner or pole bean. These beans of both sorts sell higher in market than any other edible pod bean. They are superior when shelled and boiled as lima beans are. Plant lima beans early—for its value and culture, see the article in the Horticultural Department of Maryland Farmer last month. In addition to which we commend the practice of putting a large fork full of rich stable manure around each stake or pole, before forming the hill, so that the manure being covered will furnish heat to force the young plant and nutriment to sustain it afterwards. The lima bean is one of our most valuable garden plants, giving delicious green beans until frost, and the dried beans, soaked for 6 hours before cooking, are as palatable in winter as when green in Summer. There are many other very excellent varieties of bush and pole beans, so that one can hardly go amiss.

Beets.—Presuming you have sown the early sorts, now sow the long dark blood beets for a succession and for autumn and winter. The sugar beet is also very nice when young, and it attains in a brief time size enough for the table. These suggestions are intended also to apply to carrots, parsnips, and salsify or oyster plant. The latter no garden should be without, for it is a fair substitute for field oysters, if properly managed and cooked.

Brocoli and Cauliflower.—Set out plants about the middle of the month and cultivate like cabbage. The ground should be rich, and retentive of moisture, if possible. These splendid species of the Brassica class, which sell so high in market can be as easily raised as cabbage, excepting they are impatient of drought, and therefore should never be allowed to suffer for water. Do not sprinkle daily, but every three days give a good drenching, during dry weather.

Cabbage.—Set out more plants for late summer and fall use, such as Winnigstadt, green curled Savoy, &c. Sow at once a bed with seeds of Flat

Dutch and Drumhead Improved American Savoy or other late varieties for winter use.

Cabbage require frequent working, each time stir the ground a little deeper and draw the earth a little at a time close about the plants.

Sow some Red Dutch cabbage, for pickling. It is pretty and nice mixed with white, in slaugh.

Corn.—Plant sugar corn and a late variety of table corn for a succession. No nicer or more popular dish is to be found on any table than roasting-ear-corn.

Cucumber, Squash, Melons.—Plant all these at the earliest moment, in well prepared hills, made rich with well rotted stable or sheep manure. Sow a plenty of seed to guard against the flies, bugs, &c. As they grow thin out until only two or three plants are left in each hill; as soon as they come up keep them well dusted with plaster or ashes, mixed with sulphur or soot. This dusting tends to make the plants grow and to drive off the flies and worms.

Egg-Plant.—Set out egg-plants as soon as all fear of frost is over. Open holes 3 feet apart, spade deep, put in a fork full of rich stable manure and draw the earth over it, so as to cover it 3 or 4 inches, then set the plant over the manure and water until it takes roots; it is as well to shade it also with leafy brush until the plant is growing, unless they be taken up with a ball of earth when they would need no shading.

Endive.—Sow at intervals throughout the season in shallow drills 14 inches apart. Thin out to 1 foot apart in the drills, and when full grown tie up to blanch. It is very wholesome salad. The French use it raw like lettuce, and pickled, fried and boiled. It is not much used in this country, but why it is not surprises us.

Kohl-Rabi.—This is a vegetable between the cabbage and turnip. The round fleshy bulk, like a turnip, which it forms just above ground, is used and furnishes a delicate dish.

Leeks.—Sow seeds of Leek early in drills 14 inches apart, thin to 4 to 6 inches in the drill, work often and draw the earth up to the stalk, to blanch the stems some inches high.

Lettuce.—Sow lettuce seed at intervals. There are several new sorts out this season, which are warranted to stand the summer's heat without running too quickly to seed.

Martynia.—Plant seeds of this curious looking vegetable, for pickling. Treat it as you do cucumber vines.

Melons.—Plant these. The best we know for family use is the "Taylor Gray" watermelon, and the pure nutmeg cantelope.

Mustard.—Sow a small bed with mustard, 6 by 20 feet will furnish all the seed a family will re-

quire for pickling, &c., and a plenty of green leaves for seasoning salads. The plants should not stand nearer than 3 or 4 inches apart.

Nasturtium.—Plant seeds of this valuable and ornamental vegetable. Its pretty flowers serve as a garnish for dishes, and are appetizing when eaten with bread and butter. The seed pods when green and put in vinegar are better than capers.

Okra.—Be sure and plant a few rows of this important ingredient for soup.

Onion.—It is late, but not too late to plant onion sets, or sow the seed for pickling. The potato onion and the English Multiplier are very valuable sorts and ought to be more extensively cultivated.

Peas.—Sow a few rows of peas, such as the marrows or Champion of England at intervals of 10 or 15 days.

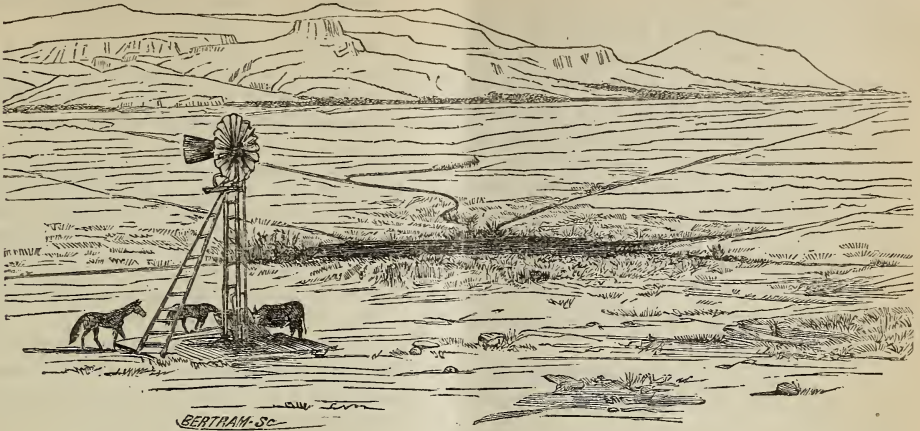
Pepper.—Set out pepper plants as soon as the weather is settled and warm. Plant in drills 18 inches apart, and 1 foot between the plants in the row. Water in dry weather keep the earth stirred often and earth up a little at one or two hoeings. Guano or hen house sweepings or any bird manure spread over the surface and hoed in when the plants are six or eight inches high will mightily increase the size and quantity of the product.

Radish.—Sow seeds at intervals of different kinds. The French breakfast radish is best for summer as it stands the heat well.

Tomatoes.—If you have tomato plants, in a box or hot-bed, transplant them in a cold frame, or rich bed which can be covered over with planks resting on poles or with old matting during cold nights or stormy weather. Put them 3 or 4 inches apart and they soon will form a bunchy root and stocky stem, that will be ready to put out in the garden after the middle of the month. One transplanted plant is worth two from the hot bed.

Aromatic, Medicinal and Pot Herbs.—Sow seeds of these a little of each sort, to be planted out in July, to be gathered and dried when in bloom in September.

FARMERS' CHEAP BLACKING.—Fill a bottle half full of nails or rusty bits of iron; then fill with sharp vinegar; shake every few days for a while; in a few weeks it will be fit for use. It improves with age. When used down fill again with vinegar. When boots become red wet in the blacking and oil them, they will look as good as new. The oil sets the color, it will neither rub nor wash off. It is good for all kinds of leather, will not injure it in the least. As sugaring, and red, soaked boots will soon be the farmers' lot to enjoy, it's well to have a bottle of blacking ready.—*Cor. Vermont Farmer.*



WATER.

Gentle reader, you may think that we have selected a very common, and, perhaps, an unimportant subject on which to address you. Let us see if this be so. We are very apt to undervalue the invaluable, particularly such things as we have never known the want of, but have enjoyed in the fullest measure at all times, until we learn to look upon priceless, vital essentials and blessings, as free matters of course—supplied, we have scarcely thought how, why, or by whom.

Water and *Air* are striking examples of this class of things, indispensable to both animal and vegetable life, but their true value, the masses do not appreciate.

Chemistry teaches us that animals and plants are composed of a few simple elements, and the great bulk of them are made up of only four of these, viz: Oxygen, Hydrogen, Nitrogen and Carbon.

Pure Water contains about 88 $\frac{1}{2}$ lbs. in 100 of Oxygen, and 11 $\frac{1}{2}$ lbs. of Hydrogen. *Pure Atmospheric Air* contains about 23 lbs. in 100 of Oxygen, and 77 lbs. of Nitrogen.

The components of these substances, so common and so important in nature, are perfectly combined, and always so remain until disturbed by some consuming or destructive influence; and in their condition of native purity, are they best adapted to the necessities of man and the lower order of animals, but the importance of maintaining, in both these substances, this all-essential characteristic purity, is far from being fully understood even by persons in the higher spheres of civilization. In order to sustain the highest hygienic condition of animal life, the air and water consumed, must be *abundant* and *pure*.

Although Infinite Wisdom has so organised man

that he may take into his lungs and stomach poisonous air and food, in considerable quantities, and in some instances, for quite a protracted period, and apparently resist all baneful influences, yet, this does not prove that there is not an unobservable disturbance of the normal functions of the system, but simply proves that we are so "wonderfully and fearfully made," that we may, to some extent, violate nature's laws, without incurring the immediate death penalty.

Wide spread drought, that terrible scourge, with appalling accounts of the dire consequences of which our exchanges so abound, has led us to endeavor to devise a system by which the calamity may be averted in some degree. The essential requisite is first for drinking purposes for man and beast.

The common sources of supply in rural districts, for which it will be our purpose to provide, are common, artesian, and driven wells, defective cisterns, rills, springs, stagnant pools of sloughs and the like. In extreme protracted droughts, in many parts, these have all failed, and the suffering and inconvenience has been fearful, involving ruinous loss.

As far as we have been able to learn, the annual amount of rainfall has been about the usual average, even in districts which have suffered most severely for available water for animal use.

If the rain water can be saved and preserved at reasonable cost, there need be no lack for this purpose, and we have confidence in the plan that we shall suggest that it may be made a means of relief and supply for watering crops, and irrigating to an extent that will be invaluable, especially for trucks.

Our plan is partially illustrated, in the plate at the head of this article. As will be seen, the surface of a field is provided with an artificial

basin, and surface water furrows, so located as to collect the water shed from a suitable area, and discharge it into said basin, which is provided with furrows, to disseminate the surplus collected.

A covered, cemented cistern is to be located contiguous to the basin, that the water may be drawn from it to the cistern, by means of a pipe in the ground. After each copious rain, the water collected in the basin is to be allowed to stand, and precipitate its silt and correct its turbidity, when it is to be decanted or drawn off and stored in the cistern; from which it is to be pumped. If pumped by wind power, the excess pumped is to flow back into the cistern.

All observers know that a large amount of water may be collected in this manner, even from porous open soils.

Even allowing that half or more of all that is gathered in the basin is absorbed by the ground, the area from which it is collected, may be extended indefinitely, and a large amount of water collected. If it is desirable to have the water as pure as possible, it is only necessary to filter it in the cistern.

It is our purpose, at an early day, to give our readers an article on cisterns, their construction and uses, how to arrange filters, &c., which want of space in this connection excludes; also much of the detail of this new system of obtaining water.

It may be collected from cultivated surfaces as well as from land in sward.

In strawberry culture, the crop is not unfrequently lost for the want of water that a cistern would supply, and that one full crop would pay for.

Whilst water so collected may be often made to save crops of other small fruits and vegetables, there is, perhaps, none which would give a better return for the water than the strawberry.

The scale of this system is susceptible of being extended indefinitely; and as provision is made for gathering and preserving greater quantities of water, the cost of the apparatus required for a given amount of water is diminished, i. e., a cistern of a million of gallons capacity, would not cost more than three of 100,000 gallons' each.

TO PREPARE CLOVER SEED.—Clover Seed treated as follows is highly recommended by a farmer who has thoroughly tested it:—Put the seed into a tub and wet the whole thoroughly without floating it, and mix it with twenty-five pounds of dry land plaster (gypsum), or sufficient to dry it properly, and sow the usual quantity of seed per acre. The importance of securing a good start of clover can hardly be over estimated. Therefore sow the seed early—the earlier the better.

Rotation of Crops in Hungary.

The singular and severe system of cropping on one of the finest estates in the kingdom, containing 11,777 imperial acres, is as follows. They have two courses, one of five and one of ten years:

Five year Course.—1st year, Vetches dunged. 2d year, Winter Wheat. 3d year, Sugar Beet or Mangold. 4th year, Barley. 5th year, Oats.

Ten Year Course.—1st year, Rape, dunged. 2d year, Winter Wheat. 3d year, Sugar Beet. 4th year, Barley. 5th year, Winter Rye. 6th, Indian Corn, dunged. 7th year, Lucern or Sanfoin. 8th year, Lucern or Sanfoin. 9th year, Lucern or Sanfoin. 10th year, Lucern or Sanfoin.

Three plowings are usually given for Rape and for Sugar Beets, and two for wheat, rye and maize.

We will give the average product per acre, of such crops as is grown in that country:

Wheat, per acre,	24 bushels.
Rye, “	25 “
Barley, “	33 “
Oats, “	50 “
Maize, “	28½ “
Sugar Beet, per acre,	300 cwt.
Mangold, “	380 cwt.
Maize, “	60 cwt.
Cut green, of any produce	
Lucern, per acre,	41 cwt.
Sanfoin, “	25 cwt.

It appears that the only grasses used in seeding the land when it is laid by, after this exhaustive rotation, with only one manuring in a five year course, are lucern or sanfoin, and that they yield but about one to one and a quarter tons of hay per acre.

We obtained this data from the Report of the Continental Farm Inspector, representing the Royal Agricultural Society of England, hence, we infer that it is thoroughly reliable.

In speaking of the manure applied to the crops, none is mentioned or described, only as dung; we infer that farm barn yard manure is meant. The quantity applied is not given. It is notable that in both the five and the ten year course, that wheat succeeds the crop which received the dung, and that the average yield of it is good; far above the average in our wheat States.

The yield of Lucern is not 50 per cent. of what we have produced per American acre, in Pennsylvania.

We found lucern to be one of the most desirable grasses that we ever tested for soiling purposes, but to be most profitable, it must be grown on congenial soil, and in a proper climate. It grows well in the latitude of Philadelphia.

If the Hungarians were to use red clover instead of lucern and sanfoin, it would be more serviceable in maintaining the fertility of their soil, under their severe system of cropping.

For the Maryland Farmer.

GRAPE CULTURE—Concluded.

BY D. Z. EVANS, JR.

OUR BEST VARIETIES.

We have been growing grapes now for some eight or nine years, with varying success, and now have about eight acres in vines of different kinds, the Concord largely predominating. We consider the Concord as the very best variety for general market culture, at least in this latitude, and it is generally conceded to be the best market sort over a large extent of country. It invariably bears large crops of fine fruit, and is freer from disease and insect attacks, on account of its rampant growth, than any we have yet tried. The Concord is with grapes what the Wilson's Albany Seedling is with strawberries—the standby for market purposes.

In regards to other sorts, I do not care to speak so decided in regards to the merits, for, while many we have are most excellent table varieties, the profitability is questionable. We have grown Allen's Hybrid and Maxatawny, most excellent white grapes, vigorous growers and good fruiters, but have not put them on the same footing with the Concord, in regards to the size of plantations.—We expect to put out quite a lot more of these this year, if we have the time to do so, as the returns from those marketed have been very satisfactory indeed. Although many persons experience great difficulty in propagating these two sorts from cuttings, planted in the ordinary way, as they are far more uncertain of growth than the Concord, yet, we each year grow a moderate percentage from cuttings planted in the opening ground. And permit me here to say, that much of the uncertainty of growth is due to a want of care in wintering the cuttings, so as to prevent them from having their vitality injured or impaired by drying out. In addition to the above, we grow Rogers' Nos. 15 and 18, and thus far consider them good sorts. The Salem, although it is a fine looking grape, with large berries, it has, with us, proved to be somewhat subject to blight, while the flavor of the fruit is very unpleasant to my taste. The fruit sells readily to those who have not tried it, but all the buyers *forget*, as a rule, to buy the Salem a second time. As this year will be the first fruiting year, for us, of the Goethe, I will be better prepared to speak of its merits or demerits, at the end of the season. The Telegraph ripens with the Concord. It fruits well, and has a very nice compact bunch. The Iona, though a fine flavored and a good table grape, does not prove a very profitable market sort, for it loses its foliage, and the bunches are very straggling.

The Catawba has nearly the same demerits as the Iona, while the Isabella proves to be almost worthless now with us.

We have several more kinds on trial, in fact, have about two acres devoted to vines of different kinds, to experiment with, and if a variety is found worthless, the row is continued out with some sort which we have found to be good and desirable. Until the vines commence to fruit, we grow either vegetables or strawberries, so as to make the vineyard pay in other things, if not in grapes.

VINEYARD IMPLEMENTS.

As a rule, grape vines spread their roots near the surface, so as to get the benefit of the moisture as well as to seek comparatively loose soil. This being the case, it is unwise to plow deeply, with a two-horse plow, for many of the most valuable roots are destroyed by so doing. Our plan is to plow moderately deep with a one-horse plow, and then cultivate deeply with an ordinary cultivator. As we experienced a difficulty with the common cultivator, in having as level a culture as we consider desirable, we invented a cultivator tooth, which consists of a hollow stem of malleable iron, the cutting part being a diamond shaped piece of steel, which can either be run flat, or on a slight inclination. This cuts off all weeds and loosens up the soil, yet, lets the soil return to nearly the same smoothness. We believe in deep but level culture. A hoe is an implement, too, which should be used repeatedly in the vineyard, around the vines for there are places where it is impossible to use a horse implement, and necessity requires a hoe to be used to remove the weeds and grass, and to loosen the soil properly.

We commence to work the vineyard as soon as the vines are tied up, by plowing the vineyard from the vines, and harrowing well. We then keep the cultivator running as often as is necessary to keep down the weeds and keep the soil loose—about every two weeks—until the grapes commence to color, when we throw two furrows towards the vines, and let them alone until after grape season, when we fix them up for winter. Just before the grapes blossom, the cultivator must be discontinued until after the fruit has set, otherwise, much fruit will be lost by rubbing off the pollen or breaking off the flowers or blossoms. As soon as the fruit has all set, start the cultivator again, and cultivate well and deeply, and remember that the best of cultivation and fertilizing is necessary to success when accompanied by otherwise proper attention to the vines.

TRENCHING.

Trenching or trench plowing, is not only unnecessary and useless, but also, very expensive. We

never did any thing of the sort, for we doubted the success, and could readily make an approximate estimate of the cost. We made careful inquiry, and soon found that our first views were correct. We found several persons who had tried the experiment, and found it a very costly one indeed. One experiment I remember in particular. Mr. Thomas M. Harvey, while superintendent of the Experimental Farm of Chester County, Pa., trenched two acres or more, some two feet or more, at great expense, and planted vines on the piece in the most thorough manner, as he does all he undertakes. Some vines were planted on soil which had not been trenched, and they did much better, in regards growth and fruit—those on the latter piece—than those on the piece on which so much money and labor had been expended. If you wish to try trenching, try it on a very small scale first, and I do not think you will ever try it again.—Trenching is not only not necessary to eminent success in growing grapes for market, but is decidedly objectionable and expensive.

MERITS OF VARIETIES.

In regards to the merits of the following, I would say that the Delaware is a nice market grape, could we get enough of them to market. Rogers' No. 1, may be a good sort, but we want more experience with it before we advance a decided opinion, while the Goethe stands on the same footing with us.—Norton's Virginia, and Ive's Seedling, are good grapes for wine. The Martha is said to be the "White Concord," and is a comparatively good sort. We would not care to make it a speciality for market. With the Alvey, we have had no experience whatever.

WINE MAKING.

We have made wines of different kinds and grades, in limited quantities, for the last ten years, and with very good success. We never have tried aerating vines, but suppose it a very good way to ripen wines in a short time, although we like our method very well, and the product of our labor in this direction seems to be well appreciated. As it would take up too much space just now to give our method of wine making, I cannot do more now than promise to devote a special article to wine making in time for the vintage of 1875.

In regards to answering question No. 10, I would say, that it is the most comprehensive one of the lot, and would take up far more space to reply to it, than to all the others combined; such being the case, I consider it best to hold myself in readiness to answer *special* questions, as far as my experience goes, and I have the time to do so.

Kerosine oil is good for removing rust from cutlery.

THE FULTZ WHEAT.

Editors Maryland Farmer :—I desire to give the readers of your valuable journal, the origin of the Fultz wheat, as this variety has proved a success, particularly in the Southern States, where the soil is adapted for wheat. In the summer of 1862, Mr. Abraham Fultz, of Mifflin County, Pennsylvania, while harvesting some old Lancaster red wheat, noticed three beautiful heads of smooth wheat.—He took these heads home, and in the fall sowed the wheat, on a spot where a brush heap had been burned. The following summer he harvested half a pint. In 1864 his crop increased considerably, and in 1865 he had nineteen good sized sheaves. Mr. Fultz then parted with a bushel of the wheat to a neighbor, who sowed it along the northwestern side of an old orchard, where it was a partial failure, in consequence of snow-drifts and shade by apple trees. In the following year it was considered not worth introducing, but when threshed, it was found to yield beyond expectation, much better than the Lancaster red, our favorite variety. It was sown again, and from about three acres of sandy land, the yield was ninety-four bushels prime, clean and plump wheat; and the following year, from thirteen bushels sown on nine acres, the yield was three hundred bushels—the yield with other parties was from thirty to thirty-five bushels per acre. The Department of Agriculture was informed of this new variety of wheat, and the Commissioner bought a small quantity for distribution for his Department, and proved a great success in a number of States where it was introduced. The variety is early, smooth; the straw stands well; the chaff very close; it is very evenly six-rowed; the grains are short and plump, and in color light red—makes the very best grade of flour. In my opinion, it should be sown a little later than the Lancaster red.

BALTIMORE COUNTY.

ORANGE CULTURE.—In Putnam County, Fla., the product of the orange crop for the year 1874, was 1,000,000—an increase of 300,000 over that of 1873. The number of acres occupied by orange groves is 200. A correspondent residing at Clear Water Harbor says: "In this part of Hillsborough county, west of Tampa Bay, there are 70 orange groves containing in the aggregate about 30,000 trees, nearly all young, and comparatively few bearing. About 3,000 trees bore fruit this year. The product of all the groves in this part of the county will not much exceed 300,000 oranges—production increasing rapidly every year."

BLIGHT, OR RUST IN GRAIN.

A press of other matter has prevented our earlier calling attention, to that able and highly interesting essay, published in our January number, headed, "*An Essay on Puccinia, or Blight in Grain,*" read before the Academy of Science, by its author, our veteran botanist and florist, Jno. Feast, Esq.

We are greatly indebted to our esteemed friend for that Essay, and we are sure that all our most intelligent readers will heartily concur in our sincere acknowledgment of this timely scientific paper. Mr. F. has a vast store of knowledge that will be invaluable to our readers, and we confidently hope that we shall hear from him often.

He has given a very full and correct history of the Parasitic fungoid growth, often found on the stems and leaves of the smaller cereals, known to farmers as blight or rust, and has given the generic name of the variety which grows on these grain plants—told us its microscopic appearance—how it is propagated and disseminated, and how it destroys the plant, and incapacitates it for maturing seed. Our country lost heavily by the ravages of this parasitic grain destroyer, but it, like all larger species of vegetable life, can only flourish and develop to the serious injury, or destruction to the plant on whose vitality it feeds, when and where circumstances and surroundings are congenial.

We have often observed, that a condition of the atmosphere indicating unusual humidity, producing heavy fogs for several consecutive mornings, by which the direct action of the sun is diminished to a degree that the soil, especially in valleys, becomes so cool that it continues to condense the vapor in the atmosphere into fog, prevails until near mid-day, is generally followed by blight.

This humidity, with so little sun, so softens the epidermis of the stems and blades of the grain, and so opens the pores, (so well described by Mr. Feast,) that all the requisite conditions are provided for receiving the floating seeds of this fungoid plant, and supplies them with every condition essential to their germination and growth; also for their increase to the fatal degree, for the health and vigor of the grosser plants, whose bark they have adopted as their congenial seed bed.

We have frequently observed, that grain on low, interval land, always suffers most from the attacks of blight, also, that high, well-drained land is not apt to have the crops on it attacked. New land, or virgin soil, from which the alkaline properties have not been exhausted by production, or filtered out by frequent culture, even if rather low, suffer less than land long tilled.

Land, containing a full supply of soluble silica,

and properly drained, produces grain plants so well fortified by a dense shield of silica, that they are capable of resisting the softening influences of humidity in the atmosphere, to that degree, that the dust-like seeds of blight, or the fungoid plant, does not lodge and grow in the surface of the blades and stems of the cereals. Bottom lands, that abound in other elements of fertility, and necessary plant food, frequently lack the vital essential of a perfect grain plant, an abundance of soluble silica. A vigorous, and often a gigantic growth of grain, is seen on such land, but for the want of silica, its stem is weak, it is predisposed to attack of blight, falls prematurely, and yields no crop; yet with the single exception, perhaps, it contains every essential element of healthful, vigorous grain plants.

These soils are generally the most fertile in all other respects, but lacking the silica, they may as well lack all.

It is very strange, that of the great variety of commercial fertilizers in our markets, none of the manufacturers have incorporated in their preparation a proper proportion of soluble silica, all claiming that sand in the soil will yield all that is required.

But this is not the experience of intelligent practical observers. A soil may consist largely of sand, and being destitute of soda and potash, may be wanting in soluble silica.

The question arises, is there not a form of soluble silica, which may be obtained at less cost than the alkalies required to act on sand, by which to produce an abundance of available silica?

After the above was in type, we had placed before us, just what we have so long desired to see—a fertilizer, containing in an available and economical form, *soluble silica*.

That reliable and well known house of G. & N. Popplein, Jr., of this city, it appears, has found a native substance, known as "Infusorial Earth," or, Vegetable Silica, which after careful treatment by their chemical process, is brought into a state of most minute division, and is ready at once to be taken up and assimilated by plants.

These chemists incorporate dissolved bone and potash salts with their vegetable silica. The value of the bone and potash for cropped soils, has long been known. For proportions of the three substances in this new fertilizers, see the advertisement of the Messrs. Popplein.

The insufficiency of silica in an available form, in soils otherwise fertile, and how it may be most economically supplied, has long been a subject of serious consideration with us. We shall give it consideration in a future issue of the "*Farmer*."

Our Travels and Thoughts on the Renovation of Worn-Out Lands.

Taking a trip lately on the Balt. and Pot. R. R., we noticed the fact which seems to be appertaining to most roads, that is, the cheapest route for a railroad is generally through that portion of the country, remarkable for swamps or sterility. Knowing what a garden spot Prince George's used to be, we were surprised at the low miasmatic swamps, high hills, and sterile plains, this road was built along side of, through or over. Its location is peculiarly unfortunate for the traveller to form a just estimate of the great beauty and fertility of the lands in Prince George's and Charles or Anne Arundel counties. An intelligent and zealous gentleman—agriculturist of Baltimore County, remarked that in less than ten years, all Southern Maryland having access to the various railroads in operation and being built would be the Eden of Maryland. With such an encomium from a wealthy farmer on the rich clays of a county in close proximity to Baltimore City, fresh on my mind, I look at the exuberant growth of vegetable matter in the swampy grounds on our left as we glided along and on the poor hills or worn-out levels on our right, and pondered the question, how will these be most easily brought into high fertility. First, we thought for the low lands, hard labor, expended in grubbing and some expense in draining, by open, as well as by covered drains. It is a country free from stone, but tiles are cheap, and oyster shell are accessible, which our associate editor, Mr. Wilkinson recommends highly as warranted by theory and practice. The up-lands want clover and plaster, after good culture and some manuring, by either barnyard manure, fertilizers or green-manuring such as plowing under rye, then peas; either one, or *all*—would be better. By such a process these originally very fertile soils can be recuperated in a few years at little cost, and more surely done, than by a heavy cost of \$50 to \$80 per ton for guano and other fertilizers. True it is that a dressing of 25 bushels of lime per acre would be of great and lasting benefit to most of the soils, but the lands of this section are filled with marl and can in a majority of cases dispense with lime—*clover*, is the grand, never failing specific. While indulging in our speculations as to the renovation of worn-out lands, in the cheapest manner, we happened to have handed to us the last monthly report of the Agricultural Department of the United States, and it so completely supports our views with arguments and facts that we extract a paragraph which explains what we desire to say and so forcibly, we had rather call attention of our readers to its perusal than write out our own views

and our experience of years gone by. The report of the statistician, Mr. Dodge, says:

"In one case in Butler County, Pennsylvania, a section of thin, gravelly land, on which it was thought no one could secure a decent living, came into the possession of German immigrants at nominal rates. They cleared off the brush, plowed, cultivated, turned under grass crops; saved every fertilizing material available; never duplicated a crop in five or six years' rotation, and that tract is now a garden, and from worthlessness has advanced to the value of \$100 per acre, and is yearly becoming more productive. These owners, in some cases, have raised and educated families, lived comfortably, ride in carriages, and have money at interest. In other instances in which the aid of clover has been invoked, swine-feeding in the clover fields has been made a valuable means of soil-improvement. In the South, a region which many northern writers on agriculture assume most erroneously to be unsuited to grass culture, and which southern farmers have strangely neglected as a meat-producing section for obvious reasons, a new era is dawning, and clover and orchard-grass are in many places found to be sources of immediate and heavy profits, and of greatly increased fertility. In light lands of more torrid temperature the cow-pea performs quickly and inexpensively the work of amelioration assigned to red clover in argillaceous soils. It is a plant literally worth millions to the South; possibly as good an ammonia gatherer as clover; perhaps equally as good for fattening swine, and grown with greater facility in poorer soils."

This subject of renovating worn-out soils on the most economical plan, is of paramount importance to our whole people, and should never be lost sight of by our intelligent cultivators of the soil. Let each one experiment on a scale suitable to his means, and give our farmers the results through the columns of the *Maryland Farmer*.

Seasonable Hints.

We clip the following timely hints from the Ohio Farmer:

"Cattle droppings on pasture grounds should be broken up and finely pulverized, and well scattered, without delay: left alone they are an injury, but, properly attended to, are a great benefit to the land. Bare places in meadows should be well harrowed, and fresh seed sown liberally. Don't be in a hurry about plowing; let the ground get dry first. Land plowed wet, does not get over it all summer, and crops are put back more than they would be to wait a few days longer. The drying process may be accelerated by drawing off all standing water by surface drains, and seeing that underdrains are not choked up. In doing such work as this, wear rubber boots. They may save you a spell of sickness, or your life, even, and many times their cost. If horses have not been grained regularly, begin now, or if the rations have been small, commence to increase them. Don't wait till you commence work, and then give full feed all at once. Clean out cellars and ventilate thoroughly, as soon as danger from frost ceases. You can prevent sickness and doctor's bills, in this way. Prune trees and bushes before buds start, and remove old canes from briars."

Why Farming Pays no Better.

On this subject, which has been somewhat ventilated in these latter days, a Mr. R. B. Shepard, Mt. Vernon, Indiana, gives his views and advice to his brother farmers, as follows:

"One of the reasons why farming pays no better with the majority is simply this. We raise too few kinds of grain and grass, and not enough kinds of stock. The farmer that raises nothing but corn and hogs can never expect to make as much money as the farmer that devotes his time to the care of horses, cattle, sheep, hogs, and poultry, and to the raising of wheat, corn, clover, potatoes, and fruit. The last-mentioned farmer has work for himself and his teams every day in the month and every month in the year. He has always something that will bring a fair and remunerative price, for if some of his crops are low others will be high. Last year corn was selling in south-western Indiana for 30 cents, while wheat was worth from \$1.60 to \$1.80 per bushel.—The farmer that held both was a lucky man. If one did not more than pay the cost of production the other did. Not so with the hog and hominy farmers, who had nothing to sell but corn at thirty cents a bushel, which would not more than pay the cost of production. Let us glance at the figures and see where the most money is made, in mixed or corn farming. Let us suppose that a man is going to plant eighty acres of corn. The breaking-up of the land, planting, cultivating, gathering, and hauling to market will cost, in round numbers, \$800, and counting the interest on the money invested in the land, and the taxes, the corn farmer will be behind in dollars and cents. Not so with the farmer who raises all kinds of farm produce. He is cultivating twenty acres of wheat, twenty acres of corn, twenty of timothy grass, five acres of root crops, such as beets, potatoes, and turnips, ten acres of orchard, and five acres of other kinds of farm crops, with all kinds of live stock in proportion. His wheat will yield fifteen bushels per acre, in all 300 bushels, which, at \$1.50 per bushel, makes \$450 for wheat; corn, fifty bushels per acre, 1,000 bushels, at thirty cents, making \$300; timothy, two tons per acre, forty tons in all, at \$16 per ton, \$640; the root crops will yield an average of 200 bushels per acre, making 1,000 bushels at twenty-five cents, equal to \$250; the orchard ought to bring in about \$500 a year at least. The other farm crops I speak of will bring in probably \$100. Thus at the end of the year he has the snug little sum of \$2,040 against \$1,200 of the 'hog and hominy farmers.'—Besides his grain, &c., he will have butter and eggs, and a fat hog to sell during the Summer months.—We should follow mixed farming for reasons besides the money making. We all know that planting corn year after year, on the same land, is injurious; it wears the land out and in a few years it is unfit for cultivation. But if we look to our interests and follow mixed husbandry, and study out a rotation of crops that is best suited for our land, and keep it up, we will have land in better condition to leave to our children that it was left to us. Another way to make farming pay better is to drain more, dig ditches, to let off all stagnant water, and in some cases your crops will be about doubled. The last reason I will give is this: We as farmers read too little, and consequently we are behind the

times. I do not mean all farmers, but the majority of them are. The majority farm the same way that their fathers and grandfathers did in old times when agriculture was not making as much progress as now, and was comparatively in its infancy. Farmers should study in the Winter months, and lay plans for the Spring and Summer. Read papers of sterling merit, and select such books as Allen's New American Farm Book, Todd's Young Farmer's Manual, Harris on the Pig, Stonehenge on the Horse, Allen's American Cattle, Randalls' Sheep Husbandry, and Sanders' Domestic Poultry, [with the *Maryland Farmer*,] and then they will have a library in itself that they can read rainy days and winter nights. This not only profits them, but will afford many hours of pleasure in learning more about their profession, raising and elevating it. This, with the majority of farmers, is now ranking as the lowest down calling that man has ever known. But it should not be so; it should rank with that of any other profession."

Lime and Clover as Renovators.

A correspondent of the *Country Gentleman* thus sensibly discusses the effects of these two important renovators:

"Lime and clover together are by far the cheapest renovators and fertilizers of land in all situations where limestone and coal are contiguous.—The extent of the liming can be traced in the crops for ten years. Outside of it, in the same field, all this time there is a comparatively marked feebleness of vegetable growth. Great mistakes are, however, made by unfledged experimenters.—When lime is spread upon a bare worn-out field, containing no vegetable matter of any kind, it is simply a destroyer instead of a help. It should always go upon sod land just broken up, either clover, timothy or blue grass, or indeed any heavy coat of weeds, roots, &c.; such as, when rotted, makes with animal dung, good organic manure.—The province of the lime is simply a decomposer of all vegetable matter, and to prepare it to be valuable food for the new plant. Lime itself, without the above resulting good, is an enemy of plant life; and when too much of it is spread at once, it is an injury even on land with some vegetable matter.

Another serious error is often committed, in ignorance of agricultural chemistry. Eager to make a great crop, they haul out the barnyard manure and dump air-slaked lime with it, sometimes on the same pile. This is getting up an antagonism between two friends of plant life. The potent energy of stable manure is in its great concentration of ammonia. Ammonia is to vegetable life what blood is to animal life. Chemistry and experiment will teach us that lime is in mortal enmity to ammonia, and at once drives it all off, destroying the value of the manure. Hence we should manure the first year, and then next year, when a coat of grass is on the ground, sow lime (say 100 to 120 bushels per acre on heavy limestone land), and we have ground that will not fail to pay well for tilling.

Clover is valuable because it shades the ground and retains the native ammonia, and not, as some suppose, because it leaves roots in the ground.—Gypsum is valuable because its property is to fix the ammonia in the ground, and to prevent its waste by the winds, sun, &c."

PISCICULTURAL PROGRESS.

That fish culture is evidently destined to become as much a settled pursuit as stock raising, we believe its past progress, as well as its prospects for the future, leaves no reasonable doubt. The success which has attended the efforts of the public-spirited gentlemen, who, for several years, have devoted their time and studies to the industry, is certainly very flattering, and an abundance of the finest and most delicate of game fish, in almost every stream and brook, suitable for their development, appears now to be dependent mainly on the degree to which individuals will interest themselves in procuring the necessary spawn. This, through the new transporting apparatus, which we illustrated last week, is reduced to so simple and easy a proceeding, that the means for populating otherwise waste waters is to be obtained merely for the asking, or at most attended with an expense intrinsically trivial, and entirely inconsiderable in comparison with the benefits to be gained.

We took occasion recently to speak of the landlocked salmon as an excellent fish for stocking streams. There is another species which is worthy of equal commendation, and which is, besides, especially suitable for streams preserved for sporting purposes. We allude to the grayling, the natural habitat of which is in streams in Michigan, flowing into the Lake. This fish has, during the past year, been successfully hatched in New York State. It is not so good eating as trout, but is not at all inferior as a sporting fish. It is easily kept in good condition, and does not require so much food as the trout, and it is in season while the trout is not. The grayling spawns in April and the trout in November.

Mr. Seth Green, however, adheres to the belief that trout is the only fish with which to restock worn-out streams, and he states that in no event can grayling and trout be reared in the same waters.

Mr. R. B. Roosevelt, President of the American Fish Culturists' Association, at the recent annual meeting of that body, briefly recounted progress during the past year, in his opening address. Shad have been put on the Pacific coast, and captured in Sacramento river where they have never before been taken. So, also, bodies of water previously destitute of fish have been well filled with salmon trout, white fish, and various varieties of bass.—Experiments are in progress with relation to the sturgeon, and it is believed that this valuable and large fish may be successfully artificially hatched.—*Scientific American*.

Water window plants with tepid water, and wash the leaves often.

POTATOES.

So far as my observation and experience goes, the best and surest yield of potatoes has always been obtained from land deeply and finely plowed and harrowed, but with shallow covering of soil, in drills about three feet apart, the seed dropped, piece at a time, about 10 inches apart in the drills, with two or three inches of manure or muck on top of the thin covering of soil.

At a meeting of the American Institute Farmers Club, 1872, the following statements were made:

PLANTING POTATOES UNDER STRAW.

A. B. Fink, of Holden, Missouri, inquired if mulching with straw or hay is better than the usual way of covering potatoes, and how it would work on the prairie, where high winds prevail.

Dr. Trimble said: The fact that potatoes will grow on unplowed ground is well established, and gave instances where the yield was much larger when grown by this method than ordinary. The trouble of planting in this way is greater, but there is saving in cultivation.

Mr. Nash said he had tried the plan in a small way, and he estimated his yield at 300 bushels to the acre.

Mr. Stewart thought the winds too high to render this method successful on the prairie—cover with manure.

PEERLESS POTATOES.

Reuben Woolman, of Woodstown, New Jersey, stated that he planted four pounds of Peerless potatoes last year. When about half grown, the vines were striped of their foliage by the potato bug. New leaves came out, and the potatoes ripened about the 25th of September. The yield was 480 pounds. When dug, they were dry, mealy, and of a fine flavor, but in six weeks they were a little watery, and have remained so.

Usually, this is a long, sound, keeping potatoe, when raised in good, dry ground, and left a few hours in the sun after digging to dry.

D. S. C.

“BE CAREFUL to bathe horses shoulders just beginning spring work, three times a day with cold water. If the shoulders are tender, use a decoction of white oak bark.”

But care should be taken not to bathe the horse's shoulders when he is warm, for a sudden splash of water upon a horse's breast when he is fatigued, often produces founder.

It never pays to raise poorly bred or stunted stock. The same feed will make a healthy, well-bred animal thrive,

THE DAIRY.

LONG TABLE TALK ON DAIRY MATTERS.

TALK NO. XIII.

TREATMENT OF THE COWS—SOILING.

Before giving in these papers any further hints on the mode of treating milk, or the processes, or utensils, or buildings employed in the making of butter, we feel that the most important subject now for attention is the cows themselves and their feed, for the ensuing season.

FIRST GRASS.

As a preventive of a prolific source of disease let no cows go on wet grass for the first time, nor on clover or other grass more than a few minutes, say fifteen at first. For an early bite, it is a good plan to burn off the old sedge fields and swamps, taking the precaution to run furrows around the portion to be burnt or otherwise protecting adjoining fences and woods from the spread of the fire: land so treated quickly sends up, under the genial influence of the early rain and warm sun a large amount of tender and nutritious feed which cannot be obtained by neglecting to burn.

EARLY FEED.

For a good and full feeding of green feed, we sow in the fall enough rye to cut up green about the tenth of May or earlier with a favorable season, before we turn out on the clover field; this gives the clover a chance to grow up strong and nutritious, become well rooted and vigorous and shade the ground, besides giving the cows a fresh green bite—to satisfy their desire for a change of feed as grass time approaches,—a short time before clover should be pastured: a hint in regard to feeding the fresh rye (or any new feed or change of usual feed) with great caution—a small quantity at a time until the animals get accustomed to it—is not out of place when we see how many cows are injured by this practice of sudden change and the recipes for hoven, bloat and inflammation, which annually go the rounds of the press. Even oxen have been known to bloat up while standing before a cart in a clover field, biting as they had opportunity, while they were driven through the field, in spreading fertilizers.

We are writing for the novice, for the eye of inexperience as well as to throw out reminders to those who know, but are apt to forget their knowledge or neglect to use it, when it would prove beneficial.

WHEAT—OATS.

We have used wheat cut green after rye, but while it answers for a change, it grows slowly, is

by no means as rank as rye and we think should be left out of our rotation of soiling crops and an effort made to replace it by clover and orchard grass, which, with proper cultivation, may be cut about as soon as wheat or somewhat sooner.

The oat is a plant requiring cool weather and moist rich land for an abundant yield and although it makes a fine feed for a change, it comes in late, grows slowly and thinly, and like wheat occupies a place in the soiling rotation of our section which can be supplied by more luxuriant plants and those better adapted to the season in which the oat may be fed: this is usually the latter part of June when clover and orchard grass are in their best condition for feed.

The object of soiling is to keep more cows on the land than could be kept by pasturing alone, hence the necessity of supplying substitutes for pasture and also *adjuncts*, and by feeding plentifully of the articles we have mentioned, a very little grass and a very small field will answer for many cattle, but no matter how well fed in the stables, now matter how efficiently and thoroughly the soiling system is carried out, we hold that cattle should have a *range*, either in a wood lot or shaded pasture field with good water: there need not necessarily be any pasture in the field, but we believe the best results will be obtained in the health and good breeding of the cattle, and also their product and durability by making pasturing and soiling twin aids in feeding, the one the adjunct and complement of the other, *although* there are instances of successful feeding under close confinement; but the cattle are not likely to receive the great additional attention necessary to keep them well fed, well watered, clean and healthy, and the surroundings clean and healthy, from ordinary farmers who practice mixed husbandry.

CORN FODDER.

The articles we have mentioned will carry the cows well up to the middle of July, from which time to fall pasture, say the middle of October, the farmer experiences the greatest difficulty and encounters the most expense in feeding his cattle.

We are aware that farmers will not all agree to this, and that the stubble fields and meadows are eagerly looked forward to as range for cattle in July and August, when the flush of early summer pasture has given place to the dried vegetation of harvest time, but we regard this close pasturing of young clover on the wheat stubble, exposing the bare ground to the baking summer heat as a weak and injudicious part of our system, and the biting down of meadows as a part of that system of exhausting land, against which the friends of the system of *improving* land should utter their earnest

protest. Corn fodder offers a means of avoiding this serious error, for if the young clover and the springing grass of the after math, the rowen, can be left on the ground to get well rooted, shade the ground to keep it growing and mulch the ground to keep the roots from freezing out in winter, a great step is taken towards increasing the productive capacity of the land so treated: an increase which fully warrants the cost involved.

Sow all the corn that will be required as soon as the ground is in suitable condition: do not wait for successive sowings as sometimes suggested: put it all in at once, about the 1st of June, or earlier if the ground is warm enough to prevent the ravages of the cut worm: sow in drill rows, three feet apart: the usual direction is three bushels to the acre; this appears, to be stereotyped: try *one* bushel first and report your result; or if this is too great a departure from the old rule, make an experiment between one and three bushels: we plant one bushel with a seed drill and find it enough.

By planting all at one time the smaller stalks can be cut and fed out and the remainder left to ripen if desirable: we have found this plan practicable or by cutting the whole up for winter fodder when in full tassel (about August 15th) it has time to cure before hauling, and as rye should follow corn fodder for early spring feeding, this will give time to get in: sow in early September, if possible.

Those who have raised corn fodder on good land will no doubt continue to use it, and will readily believe that an immense amount can be raised on an acre of land: in looking over our French papers we come across the statement of M. Auguste Goffart, in the *Journal d'Agriculture Pratique*, Paris, of the quantity he raises, the variety and number of cattle kept on six acres, which we give to show what *can* be done on good land with good cultivation; from comments by the French editor we infer that his land is irrigable—the variety is Giant or Caragua corn—and from 98,000 to 120,000 lbs. green fodder per acre are raised, and six acres keep 28 to 30 head of cattle a year; his soiling rotation is rye and corn: rye on the corn stubble, and corn on the rye stubble, and the rye and corn are both preserved in pits or trenches *green*, after being cut up, chaffed, packed in the pits and covered with straw and dirt like we do potatoes, and fed out from the trenches in winter.

*

For the Maryland Farmer.

DEEP OR SHALLOW SETTING FOR MILK.

Even among practical men there still seems to be a difference of opinion as to relative amounts

of butter to be obtained by the two plans. Those who favor deep setting seem to have settled upon cans eight inches in diameter and twenty inches deep as being best suited to their purpose; one of these is equivalent to three common pans and will cost about eighty cents, while the latter will cost one dollar and a half; the deep cans occupy one-fifth of the surface needed for the same amount of milk in the common shallow pans.

In a late experiment tried in Bucks county it was found that the shallow pans made at least twenty per cent. more butter. In an experiment by J. I. Carter, Supt. Eastern Experimental Farm, Penna., it was found that a given amount of milk in deep cans gave 17 lbs. 3 oz. of cream, from which 5 lbs. 10 oz. of butter was made. The same amount of milk set 3½ inches deep, in the usual way, gave 12 lbs. 7 oz. of cream which made 5 lbs. 9 oz. of butter. In both cases the pans were immersed in cold spring water up to the surface of the milk. In my own experiments, often repeated, the result varied very little, and in two cases was very slightly in favor of the shallow pans, and once in favor of the deep ones. In all the cases the difference was so slight that it may be attributed to local causes which it was impossible to govern. In every case in which I have tried the deep cans they invariably yielded about twenty per cent., more cream by weight than the shallow pans. As it made no more butter it is safe to conclude that the difference was not in reality cream, but was either caseine or water—probably both—for the deep cans expose such a small amount of surface that evaporation would necessarily be much slower than with the exposed surface of the shallow pans. The butter as it exists in the cream is enclosed in a thin film of caseine or cheesey matter; this cream in passing up through the twenty inches of milk probably increases the thickness of its film of caseine just as a hail stone increases its size as it passes downward through the atmosphere. Hence I attribute the increase to both caseine and water. After using the deep cans during one winter for a dairy of eighteen cows, I feel satisfied on the following points: That if properly managed the deep cans will make as much (not more) butter than shallow pans. That, without loss, they may be kept at a much lower temperature. That the cream from them is much more liquid and free from the dry skins (causing "speckled butter.") And that the question of their use is more one of convenience than anything else. Of course the deep cans will require much less space in the spring house and require less handling.

The result of my own experiments and the extended practice of prominent practical New York dairymen, convinces that the claim that deep cans make more butter cannot be supported and that if all the requirements of their case cannot be complied with the shallow ones will give the most satisfaction.

EX-DAIRYMAN.

Constituents of Pure Milk.—(Correction.)

Either from my own carelessness in writing, or by the mistakes of the printer, there are some errors in the milk table of my article, in the April number of the FARMER, which I wish here to correct, as it is of considerable importance.

Having again consulted Haidlen's tables of the Analyses of Milk, I find that pure milk is composed of the following constituents, or substances, in 1,000 parts:

Water, (serum or whey)	873.00
Butter, (fatty, oily matter)	30.00
Caseine, (cheesy matter)	48.20
Sugar of Milk,	43.50
Phosphate of Lime,	2.31
Magnesia,	0.42
Iron,	0.47
Chloride of Potassium,	1.44
Sodium and Soda,	0.66

1.000

By this, it will be seen, that milk contains Butter, Cheese and Sugar, in nearly equal parts.

The specific gravity of pure or whole milk, is a little greater than that of water; the latter being 1.000, and the former 1.031, on an average, though the weight of milk is somewhat varied in different cows, and various food. The specific gravity of cream is less than that of pure milk or water, and very rich milk is lighter than poor or thin milk; for the reason that cream is lighter than skim milk; specific gravity of cream is less than milk or water.

The hydrometer is, by no means, a test of pure milk, or its value, only showing whether water has been added to milk when its original specific gravity is known; but the lactometer is a very different instrument, and shows the real richness or quantity of cream in any milk to which it is applied.—Bank's lactometer is a reliable and useful one, yet, hydrometers are somewhat useful, as they show whether milk is much watered; the lactometer shows the exact quantity of cream.

D. S. CURTISS.

SHROPSHIRE SHEEP IN VIRGINIA.—Dr. J. R. Woods, of Ivy Depot, Va., says of this breed:—"The Shropshire buck I am breeding from was imported by Francis Robert Rives, Esq., of New York, (son of the late Hon. William C. Rives, of this county,) and sent to Castle Hill, the residence of his mother. Mr. Rives imported a buck and two ewes, selecting this breed because, after full inquiry of reliable sheep breeders, he was satisfied that they were the hardiest and most profitable of the improved breeds, and would suit Virginia and the Middle States better than any other. They have darker faces and legs than the South-Downs, and much larger carcase and fleece. They stand very high in England, and I notice that Hon. M. H. Cochrane, of Canada, has made an importation of them.

Buckwheat—Green Manuring.

Several subscribers of the *Farmer* have asked me to give them something on that excellent grain, in its columns, and here is a cheerful compliance for who does not have a glad smacking of the lips and watering of the mouth, at the thought of mellow, cherry-brown buckwheat cakes, smoking from the griddle, ready to sponge up the sweet butter and sweeter syrup or honey? Nothing, but the charming wife or daughter, who makes them, is sweeter to the one who fully knows and appreciates all of those surpassing delicacies.

That grain is not so much raised in this region, as its many merits and uses deserve; not so much as it is in my native portion of our country, at the North. It is, partly, because it don't like too much hot sun, and partly because all of its good qualities are not generally known by the farmers.

First—its greatest value is for a *green crop to plow under*, for renovating worn land, and to preserve good land; nothing but clover or lucerne is better, and many farmers even think buckwheat the better green manure of the two.

Second—as *bee pasture* it scarcely has an equal, for either the quantity of the food it furnishes them, or the quality of the honey it enables them to make.

Third—it affords the finest feed for poultry, when ground and made into mush, and mixed with oat meal and potatoes.

Fourth.—And, for our own table, as indicated in the beginning of this article, it needs no further commendation than here presented.

It will grow on very poor land; but then it will give correspondingly larger crops on rich land; three pecks to one bushel of seed per acre, is enough—richer land needing less seed than poor land. Sow very early or very late, to escape the hot sun days when in bloom, and a good crop will result.

D. S. C.

TOBACCO CHEWING SHEEP.—In his report, published in the *Journal of the Royal Agricultural Society of England*, Prof. Wright on, speaking of the Theiss district, says: "I found tobacco cultivated on a large scale here, and learnt that sheep do very well upon tobacco in a green state as a forage crop. It is sown in the middle of March in beds, well watered and weeded, and planted out when four or five inches high, the plants being set as deep as the heart, or to where the leaves branch off from the stem."

ONE who has tried it, says that a solution of sal-ammoniac in water will often give relief in troublesome chilblains.

THE
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BALTIMORE, MAY 1, 1875.

TERMS OF SUBSCRIPTION.

One dollar and fifty cents per annum, in advance.
 Five copies and more, one dollar each.

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1 " 6 "	75 00
1/2 " 12 "	70 00
1/2 " 6 "	40 00
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Each subsequent insertion, not exceeding four..	15 00
1/2 Page, single insertion.....	12 00
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Special Contributors for 1875.

N. B. Worthington,
Barnes Compton,
Dr. E. J. Henkle,
John Merryman,
A. M. Halsted,
Ed. L. F. Harcastle,
D. Lawrence,

John Carroll Walsh,
John Lee Carroll,
Augustus L. Taveau,
John Feast,
D. Z. Evans, Jr.,
John F. Wolfinger,
C. K. Thomas,

OUR CORRESPONDENTS.—We are gratified at the kind compliments Dr. J. E. Snodgrass pays the *Maryland Farmer* in his pleasant letter which will be found in the columns of this number, accompanied with a few lines of poetry, the moral of which we commend to the attention of our lady readers.

Our thanks are also due to our lady correspondent, WICOMICO, for her amusing notice of the Editorial Staff in her graceful and poetic communication that appeared in the Ladies Department in the April number of this Journal.

PARTIES writing to our advertisers will please mention that they saw their advertisement in the *Maryland Farmer*.

Effects of the Late Frost.

It is sad to record the terrible damage done the crops in different portions of many States, by the cold snap and the frost on the 17th and 18th ultimo. We hear complaints from all quarters. From reliable gentlemen in Prince George's and Calvert counties, that the early strawberries, peas, beans, &c., are destroyed, the same in regard to fruits, such as apricots and peaches. One gentleman reports to us that there are at least 100,000 peach trees around Prince Frederick, which will yield no fruit. But the greatest loss will be sustained by the Tobacco Growers in these counties as it is believed all the tobacco plants which were up and the seed which was sprouting were all killed. This is sad, for we fear it is too late to repair damages. Market-gardeners have suffered fearfully.

Large Crops from thin Seeding.

We extract from a report of wheat production by W. Geo. Wilkins, England, published in the *Gardener's Chronicle*, the following: "For fourteen years in succession, I never used more than sixteen quarts of seed per acre. The seed drilled in. The average yield for the whole fourteen years, was forty-four bushels per acre." He claims that thin and early seeding and thorough drainage are all essential. We think he should have added, and liberal fertilizing, especially when wheat is produced after wheat for so long a period.

OBITUARY.

On the 11th instant, at his late residence in Delaware county, Pa., our esteemed friend and brother Journalist, Paschall Morris, died of heart disease.

The family has lost an affectionate and faithful husband and father—the farmer, the horticulturist and the florist, have each lost an intelligent and zealous advocate—the society for the prevention of cruelty to animals has lost a very active and useful officer, and the public has lost one of its most capable and experienced Agricultural Journalists.

JOHN SAUL'S NURSERY.—The other day, on visiting the large and splendid nursery and floral garden of Mr. Saul, I found him and his force very busy packing and sending young pear and other trees, and flowering shrubs and plants.

Among others, were two gentlemen getting trees, in consequence of Mr. Saul's Advertisement in the *MARYLAND FARMER*. Advertising, like a good dinner, will surely make a man thrive—in house and harvest.

D. S. C.

Silica Injurious.

We have advocated the necessity for a form of soluble silica in commercial form, that we may give to our grain crops, prone to rust and fall prematurely, a shield on the surface of the straw that will enable them to resist both these fatal effects.

In reading the very rational advertisement to be found in this No. of the Messrs. Popplein, we revolved the matter of the value of this new fertilizer in our mind, and carefully noted the character and proportions of the ingredients in it, and it seemed to be compounded in such proportions that the quantity recommended to be applied per acre should yield a sufficiency of these substances, even for soils very destitute of them.

It occurred to us however, that the quality of this fertilizer, might be injurious to fiber plants, such as flax, jute and hemp.

We hope that the Messrs. Popplein will furnish the Maryland State Agricultural College with a quantity of their fertilizer, and that the college will experiment with its effects on a variety of crops, among others on flax and hemp.

Egyptian Sprouting Lettuce.



The above is a picture of this new Lettuce, which D. M. Ferry & Co., of Detroit, Michigan, discovered accidentally and perfected by careful culture for four years. Mr. Ferry is a gentleman of high reputation and therefore his statement ought to be credited. If all he says of it be true, it is the horticultural wonder of the age. "The head is composed of from 10 to 15 well developed little heads, which uniting form a mammoth head. It is very early and remains perfectly tender through the whole season, until winter. It never gets tough or bitter, and so brittle, it breaks to pieces by rough usage." It is somewhat in appearance like Brussels' Sprouts. "If any one or all the heads be broken or cut from the stalk, *new heads begin to appear at once*. A few stalks are sufficient to keep an ordinary sized family with a supply of tender lettuce the whole season. The plants should always be transplanted two feet each way apart, and they will then touch when well grown."

TO ADVERTISERS.

With an increased and daily increasing list of subscribers our paper offers as good inducements to all who have goods, wares, merchandise or stock of all kinds for sale, to advertise in our columns as any paper, daily, weekly or monthly published in Maryland. We go to the fireside of the farmer or planter and in the study of the man of leisure, and when tired of the days cares and annoyances, they naturally amuse themselves by reading what is offered for sale in the advertising columns of the *Maryland Farmer*. A gentleman subscriber the other day said he took it, to see where he could get good stock or poultry near home. He has been taking for years past, and still does so, the *Agriculturist* and the *Country Gentleman*, both first class Agricultural Journals, but he has through their advertisements been deceived in purchasing stock, paying as high as \$48 for a small fat pig, &c., and he wants a *home* paper that will tell him where he can get cattle, sheep, hogs and poultry near his place of residence so that, if deceived he can easily meet the seller and adjust matters. Our people, farmers especially, do not appreciate properly the value and the great importance, of advertising what they have for sale. No man yet in mercantile life ever got rich who did not advertise extensively.—No farmer will ever gain much profit or fame unless he advertises.

Our Journal circulates chiefly among a class of retired, home staying gentlemen, who often would send for various articles they want, but for the fact that they do not know where and at what prices they can be had. In this view, it is certainly important to all who have anything for sale to let our readers know what they have and at what price.

Tomato—Celery—Healthful.

There is no more healthful vegetable raised in our gardens than the *Tomato*; it is anti-bilious, having a good effect upon the liver, stomach, and kidneys; the writer *knows* it from long *experience* and careful observation; the free use of tomatoes—eating fresh ones in their season, and ketchup or preserved ones in other portions of the year, is sure, in most cases, to cure *dyspepsia* and a bilious stomach; while freely eating them does much to prevent those distressing maladies. Too many cannot be raised, and it is as easy to raise them, almost as Potatoes.

Celery is known to be an effective *nervine*, and freely eating that beautiful vegetable promotes easy sleep, and tends to a quiet of the nervous system. Let it be raised in abundance. D. S. C.

Proceedings of the National Grange.

We find in the *Weekly Grange*, of Little Rock, Arkansas, the official organ of the Patrons of Husbandry, a report of a meeting of the National Grange, held in February, at Charleston, S. C. A committee appointed last year to advise a plan for the representation of the interests of the Patrons of Husbandry at the Centennial Exposition, made their report, and it was adopted.

"The Committee say they find no provision has been made whereby any industrial association, like the Patrons, can be represented as an organization; that no adequate plan has been devised by the Commissioners, by which the agricultural interests of the country can be systematically and fully represented. They, therefore, recommend a further consultation with the Commissioners, to ascertain whether some modification of their plans can be effected, so as to secure proper recognition of American Agriculture." * * * *

In conclusion, the Committee say: "We deem it a part of our mission, as Patrons of Husbandry, to produce among our people a proper interest in the approaching celebration of the hundredth anniversary of American Independence, and to use our endeavors to have it do the most good possible."

We were not a little surprised on reading the report of the Committee from the Patrons of Husbandry, of the result of their interview with the International Commission.

It must be apparent to all that are acquainted with the principles on which the International Exposition is conducted, that the Commission could not be expected to make special and extensive provision for the exhibition of whatever the Granges, or any other organization of producers, may desire to exhibit. Every Farmers' Club in the land, might, with the same propriety, ask for the same special privileges, and an area of a thousand acres would be insufficient on which to hold the Exhibition.

Now, we happen to be familiar with the system practiced by the Centennial Commission, in regard to the detail of arrangements for the proper exhibition of articles in the various departments, and we must say, acted with a spirit of magnanimity and accommodation, that was most satisfactory.

We would state that we were of a committee of two, representing the American Dairymen's Association, at the International Exposition. We called on the Director General, the Hon. A. T. Goshorn, and explained to him what the American Dairymen's Association desired, viz: that it would like to have a dairy building erected on the Centennial Grounds, after a plan to be furnished by

the Association, at the expense of the International Fund. The Director General received us cordially, listened to our claim, explained their financial condition, and all else bearing on our case, and referred us to the Chief of the Bureau of Agriculture, who said he appreciated the importance and magnitude of the industry, and would do all in his power to promote the interest, but that the Commission could not assume the erection of a structure for the accommodation of any special branch of production, however desirous they might be.—He added that the nature of the object, as represented by us, was peculiar and special in its requirements, in view of which, he doubted not that the Commission would permit such a structure as the plans which we submitted embraced, to be erected under its direction, on a suitable site on the Grounds, provided, that those representing the dairy interest of the country, would subscribe for stock equivalent to the amount required for constructing a Dairy Building, and running it for the manufacture of butter and cheese during the summer of the Exhibition.

He expressed the hope that all the dairy associations of the country would co-operate, and under the auspices of the American Dairymen's Association, would provide the means required, and erect the very best plan of dairy arrangement, and operate the same, in a manner that they are fully capable of, and thus show the world how we make butter and cheese.

He very properly stated, that it would not be practicable to allow more than one structure to be erected on the Grounds, for the manufacture of dairy products on the American system, and that the same course should be pursued with other nations, if any should desire to compete in manufacturing dairy products. We trust that the Committee from the National Grange will be made fully acquainted with the true condition of things appertaining, and be satisfied that all will be done for each industrial interest that can be.

We hope that the Grangers of the whole country will co-operate with the American Dairymen's Association, and lend their financial aid in promoting the Exposition every way, and especially for raising means, by subscribing for Centennial stock, for the purpose of erecting a National Dairy Room, for the manufacture of butter and cheese. Prof. L. B. Arnold is the Secretary of the American Dairymen's Association, and J. V. H. Scovill, Paris, N. Y., chairman of Centennial Committee, from said Association.

Kerosene and powdered lime, whitening, or wood ashes will scour tins with the least labor

State Agricultural Society Meeting.

The regular monthly meeting of this association was held at the rooms, corner Fayette and Eutaw streets, on Thursday, April 1st, at 11 A. M.

President Davis introduced the subject for discussion, "Dairy Farming," in a few graceful and appropriate words and congratulated the members on the auspicious weather and attendance at the meeting. The name of J. H. McHenry was added to the Road Committee.

Mr. Fairbanks spoke in favor of Lucern, but said it was very difficult to get started, as 3 out of 4 times it would fail to grow; required rich land; he had cut it seven times in a season; its place in the soiling rotation was *first*, being ready to cut early in April; he had kept 25 hogs on lucern from April 15th to July 16th, feeding a little grain only on Sunday Evening, when the grass could not be fed conveniently; he had an acre of Italian Rye Grass from which he had cut 5 pounds to the square yard (about 24,200 lbs. to the acre); thought milk at 20 cents a gallon would not pay, and that farmers must rely on mixed husbandry and dairy farming, using commercial fertilizers judiciously and making large quantities of barn yard manure to bring up their lands.

Mr. Samuel Sands gave instances of the productiveness of lucern in Maryland and California, and referred to large profits in butter making in Montgomery County.

Mr. Haviland of Harford County gave his experience in attempting to start a co-operative factory in his county and thought he could make the milk business pay with milk at 20 cents a gallon.

Mr. Lurman, of Baltimore County, read an exceedingly able and interesting account of his extensive experience in dairy matters. He had 55 cows, and realized gross \$114, each in '69; \$173 in '70; \$171 in '71; receiving 25 cents a gallon for milk, but reduced his number of cows when the price fell to 20 cents; thought he could net \$30 profit a cow with butter at 40 cents a pound the year around; believed in keeping cows fat so that they could be sold to the butcher when they began to fall off in their milk, as it does not pay to keep them over; did not believe in trying any new experiments with lucern or any other uncertain crop for soiling, as we had now four articles that were good and reliable, rye, orchard grass, clover and corn.

Dawson Lawrence thought lucern too tender to attempt to raise it in our section, and considered its uncertainty an insurmountable obstacle to its general use; as we had clover, rye, corn and orchard grass, which we could raise and rely on, we need

not risk any thing on lucern; he had tried to raise it and failed, like most others: gave an account of the remarkable productiveness of Caragua or Giant corn fodder in France, over a hundred thousand pounds per acre being raised and 20,000 pounds green rye.

Mr. Davis had tried to raise lucern and had failed, but thought it would do well in a moist shady place.

Mr. Lawrence suggested "Sheep Husbandry" as a subject for future discussion, and it was referred to the committee on Subjects for Discussion.

The subject for discussion at the next meeting is "Application of Barnyard Manure," with William Webster to lead the remarks.

The Road Committee held a meeting at the close of the session of the State Society. Gen. Geo. H. Stewart reported additional returns from the counties concerning the road repairs and expenses, but had not yet received reports from all the counties, which would be necessary before a complete report could be made out. The Committee then adjourned.

Sweet or Sugar Corn.

It appears to me that most farmers do not give attention, as much as it deserves, to this rich, wholesome, succulent food; at least to saving it for winter use, as they can.

In Wisconsin, when farming there, I always raised a considerable quantity of "Stowell's Evergreen sweet corn," and saved it for winter use, in this way:

At the last of the season, toward the approach of frost, in October, we would go into the patch and select considerable quantities of the finest ears, break them off close to the stalk, with all the husks on; then, still leaving all husks on, we wreathed the top ends of three ears together, tied a string to them, and hung them up in the cellar—tops upward—in bunches of threes, as many as we desired to keep—hanging them free, so as they would not touch the wall.

In the winter, at New Years, or later, we would boil the ears, with husks still on, and they would come out of the pot nearly as creamy and succulent as when boiled in summer—making a rich feast.

In order to have a succession, in the summer and autumn, we would begin planting early as could be, and then continue to plant small patches, every fortnight, as long as it would answer, of the Stowell evergreen, and had a rich reward for it. D. S. C.

Butter will remove tar spots. Soap and water will afterwards take out the grease stains,

CULTIVATION BY STEAM POWER.

In 1858, a prize was awarded by the Royal Agricultural Society of England, of £500 for Steam Cultivation. Sixteen years have elapsed since the soil was first cultivated by steam, and yet, there are to day but a few hundred steam plows in use in the whole world.

We were informed recently, by our prized friend, D. Landreth, Esq., of Philadelphia, that he found in his operations in plowing by steam, (in which he and his sons were pioneers in this country,) that in plowing fallow land, the dust was a serious, if not an insurmountable difficulty.

In case the wind is with the direction of the engine, if the surface of the ground is dry, the machinery will be terribly clogged, and the operators nearly smothered with dust. Whilst we must admit that this is a serious obstacle in the way of the general introduction of steam tillage, we are unwilling to believe but that it will, ere long, be overcome by Yankee ingenuity and enterprise. Large areas, free from obstructions, must be tilled by steam, or some other power besides animal, and we confidently expect to live to see all the serious practical difficulties removed. When that parent of all invention, imperative necessity, shall assert her prerogative, and demand at the hands of the inventor, steam tillage untrammelled, and of universal application, she will respond promptly.

Let the rinderpest lay his resistless, desolating hand on our bovines, in the form of a general epidemic, and the epizootic again severely and generally attack our equines, and locomotive steam tillage machinery will be supplied at once.

We do not, however, pray for the calamity, that the blessing may follow. We believe there is a better way, and one well nigh as effective. Let the Patrons of Husbandry subscribe only a dime per capita, and thus create a fund to be devoted to prizes, 1st, 2d and 3d or more, for steam tillage machinery, and the International Exhibition grounds would require to be doubled in area, to hold them for exhibition.

Come, Grangers! come to the rescue, and do this, and you will have erected to your honor and credit, a lasting monument, one that will perpetuate the title of your Order through all time, and supply to its votaries a universal necessity—one vastly more needed than the projected Hudson River Bridge or Tunnel.

A gentleman visiting an Irishman noticed a monstrous pig strutting about the house, and asked how they got such a brute up those two stairs.—“May it please yer Honor,” said paddy, “It was niver down to be tuk up,”

Common School Education.

For the better success and highest elevation of the agricultural classes, no one thing is more needed, than a more suitable system of Common School Education in the rural districts. There, where the larger class of pupils are ultimately to follow agricultural pursuits, the sciences and principles which appertain to, and lie at the foundation of farming, should be fully and efficiently taught, such as geology, botany, chemistry, and the like, with practical lessons in horticulture, formation of soils, the nature of plant growth, and the adaptation of plants to soils and locations.

Yet, with all the great wants and importance of the rural classes, how little—next to nothing—do our books and teachers in the schools present to supply these wants. Suitable books and skillful teachers, for this business, should be supplied in schools, as common as grammars and arithmetics.

A wise Spartan, being asked, what boys should be taught in school, answered—“a full and clear knowledge of the business they were to follow through life, to fit them for it.”

Here are sensible remarks partially touching the subject from another newspaper, which may be pondered, to advantage by those interested:

“The geographies, histories, grammars and text-books of mathematics, and the elementary books of scientific instruction, have, as a whole,” it says, “not been nearly so much improved as might reasonably be expected within this generation. Rules are still crude and dogmatic, the parrot fashion is still prevalent in teaching, and the machinery is not essentially changed. It has been on trial for a long time, and nobody can deny that with a vast majority of pupils it confers only a very superficial education. The problem of breaking away from old forms and erecting new methods on a more intelligent foundation is both intricate and difficult, but it is one that is confronting all intelligent people, and must continue to excite a still deeper interest.”

BOUQUET OF BUDS, &c.—We beg to acknowledge our thanks to Thomas Fairley, Florist, Druid Hill Avenue, for the presentation of a magnificent bouquet of Baltimore Buds—comprising Safrano, Isabella Sprunt, Bon Selene, Madam Talcot and LaMarque—that in color, size, beauty and fragrance, were equal to, if not surpassing, the celebrated Boston Buds, so popular among our people. The Bouquet was on exhibition at April display of the Horticultural Society, and was the admiration of every visiter.

To John Feast, Sr., Florist, we are indebted for a number of beautiful camelias, from a magnificent tree on exhibition, crowded with these gorgeous flowers,

Specific Objects of Patrons of Husbandry.

The following declaration of purposes was enunciated at the late meeting of the National Grange, which principles faithfully adhered to, they claim, will insure their mental, moral, social and material advancement :

We shall endeavor to advance our cause by laboring to accomplish the following objects :

1. To develop a better and higher manhood and womanhood among ourselves.
2. To enhance the comforts and attractions of our homes and strengthen our attachment to our pursuits.
3. To foster mutual understanding and co-operation.
4. To maintain inviolate our laws, and to emulate each other in labor to hasten the good time coming.
5. To reduce our expenses, both individual and corporate,
6. To buy less and produce more, in order to make our farms self-sustaining.
7. To diversify our crops, and crop no more than we can cultivate.
8. To condense the weight of our exports, selling less in the bushel and more on hoof and in fleece.
9. To systematize our work and calculate intelligently on probabilities.
10. To discountenance the credit system, the mortgage system, the fashion system, and every other system tending to prodigality and bankruptcy.
11. We propose meeting together, talking together, working together, buying together, and in acting together for our mutual protection and advancement, as occasion may require.
12. We shall avoid litigation as much as possible by arbitration in the Grange.
13. We shall constantly strive to secure entire harmony, good will, vital brotherhood among ourselves, and to make our Order perpetual.
14. We shall earnestly endeavor to suppress personal, local, sectional and national prejudices, all unhealthy rivalry, all selfish ambition.

GRANGERS IN PRINCE GEORGE'S CO.

On invitation, during the past month, I visited and addressed two Granges—Oxford and Forestville—in Prince Georges County, Maryland; and found them flourishing and working finely. Of the former, J. B. Bryan, an enterprising young farmer and gardener, is the Master, or Chief officer. This Grange has a very pleasant hall, appropriately decorated and fitted up.

Of the Oxford Grange, James E. Halley is the Master; he is one of the largest and most systematic farmers and fruit growers in this part of Maryland; his lands are all well underdrained, deeply plowed, and fertilized with lime and potash, composted with earth and leaves. He is also utilizing, with marked benefit, a large quantity of

stuffs derived from the Treasury Printing office, in the form of potash-ley and oils, from the washing and cleansing of cloths, rollers and types; the combination forming a kind of liquid soap, with a part of which he freely washes the trunks and branches of his peach and pear trees; and mixes other portions of it with sand and earth, making a valuable compost fertilizer; and from both, the wash and compost, he finds large benefits. The wash makes his trees healthy, and does much to kill various insects which infest them, and cleans off the moss and shaggy bark. We have long known that the ley, with which printer's types and forms are washed, is highly useful as a wash for fruit trees, and to mix in the garden soils, to kill worms and bugs.

Hon. Alex. H. Jones, formerly, M. C. from North Carolina, is a member of this Grange, and a good farmer in the neighborhood, an intelligent, progressive one; and with the others named, is a subscriber to the *Maryland Farmer*. Others expect to subscribe, at the next meeting. The Grange is preparing to plant a fine memorial tree, at the grave of a deceased member, as is the custom in the Order, when members die—a beautiful custom.

D. S. C.

WASHINGTON, April 10th, 1875.

BOTANIC GARDENS.—This fine, instructive establishment, is now looking beautiful and vigorous, under the skillful care of Mr. W. R. Smith, and an evidence that spring is at hand is found in the exposure that begins to be given to the tender flowers and plants of these green houses. This is a highly educational institution, for either professional or amateur growers; as here, flowers and plants, from all parts of the world may be seen and studied, and their habits, characteristics and manner of treatment, may be learned, and Mr. Smith, with his staff of assistants, are civil in giving all visitors such information as they may respectfully ask for.

WM. WOLTERS & Co. have a very flourishing floral establishment in the western portion of the city, where rich and choice flowers and plants may be seen and bought; everything about it seems, like all other fashionable things, to be putting on their spring garbs.

Very few things are more creditable to the tastes and characters of a people, than is evinced by liberally cherishing flowers and plants; and nothing is more healthful than eating plentifully of good fruits, all the year round—especially the "fruits of industry and contentment."

D. S. C.

TEST any new variety of seed on a small scale, before you venture a full crop.

HORTICULTURE.

MARYLAND FRUITS.

There is probably no State in the Union so thoroughly suited to so many varieties of fruit as Maryland. *Perhaps* Massachusetts may beat us in superior pears, New York in apples, Ohio in grapes, Pennsylvania in cherries, New Jersey in cranberries, Delaware in blackberries, and so on of some other things, which in some one State or another has found out some minute element favorable to superior success. We say *perhaps*, because we believe the same especial care to suit the kinds to circumstances made in these States, and which has given them so much eminence in the articles quoted, has not been generally given in ours.—When this is done, it may be found that even in these may excellence be found, as well as in peaches and some other things wherein the palm is undisputably ours. But the fact is, that we grow almost every fruit *well*, and it is almost a matter of surprise to intelligent strangers who come to visit us, to note how much we really do. Indeed, it is a surprise to most of us, for very few know how much we can do, and have really done. Our fault has been that we take no steps to make our good works known. The fruit growers of other States attend public meetings, conventions and exhibitions, and, through the agricultural and horticultural magazines and papers, let every fact be known. The modesty of our fruit growers keep them in the back^ground. If we take up the Proceedings of the American Pomological Society, we find, of course, a column devoted to Maryland in the list of States; but on looking through the list of fruits best adapted to ours, we find not one in a dozen that are popular and profitable in various parts of it. When we look through the text for the details of the speakers for several years past, we find very few contributors from Maryland. Mr. Brackenridge and John Saul, of the District, have had to bear nearly the whole burden of what little has been done for us. Other States do not trust even to the good will and generous assistance of individuals, but co-operate, exhibit and report as States. We have heard it said that they are interested more than we are, but we doubt it. They have lands to sell, and are interested in letting the world know what that land will do—but so have we. There is no more reason why people should go so far West in search of fruitful homes—nor would they, if they knew that we had as good and as

cheap lands—and many other advantages not to be found in the West at all.

This season, the American Pomological Society meets at Chicago, on September the 8th. It will, no doubt, be a grand occasion. We hope our agricultural, horticultural and pomological societies throughout the State will bear it in mind, and endeavor to have our State properly represented.—Of course many of the fruits in which we excel cannot be exhibited at that time, but, by the aid of good reports and good speakers, we could as well let the world know what we are doing as other States can, and we hope the matter will not be lost sight of.

THE TROPHY TOMATO.

Almost every season new tomatoes are introduced, but they soon disappear; indeed, most of them continue to be enquired for no longer than a single season. The Fegee and the Tilden kept up, perhaps, the longest, though the former was, perhaps, more favored by its peculiar tint of purple red, which gave it some distinctness. It was a sourish affair at best, but still it held its own sometime, and is still in demand. The Tilden was a good kind while it lasted, but it required a good deal of care in selecting typical fruit from which to get seed; or it soon degenerated. At the present time it is hardly possible to find a dish of Tildens that the originator would call his own. Our seedsmen tell us that the Trophy is an exception to the general rule. Though it has now been several years before the public, it was never in so much demand as it was this season, and the wholesale price of the seed was almost double that of some other kinds, and considerably above that of the Tilden and Fegee. It is indeed an excellent kind, and its continuing good for so long, is all the more in its favor.

As some will want to save a little seed of their own, we thought it might serve a useful purpose to note this tendency in the various kinds of tomato, to degenerate, and to say that the earliest fruit to ripen on the plant in the season, is the most likely to reproduce the kind true from seed. It is also important to save those which seem the most characteristic. A round, smooth fruit, is more likely to reproduce that form than a wrinkled and plaited fruit. There is no vegetable in which it pays better to be careful in selecting seed than in the tomato,

THE MAIDEN HAIR TREE.

Almost every one knows a coniferous tree when they see it. The Pine, the Spruce, the Fir, the Arbor Vitæ, or even the yew, they understand at once as belonging to this class. But few would take the Maiden Hair tree, *Salisburia adiantifolia*, to be of this family. Its leaves are like those of the fern *Adiantum cappillis veneris*, the maiden fern, in form, though, of course, considerably larger, and it is this resemblance which gives to it its name.—The branches are stout and coarse, and the whole anything but indicative of the family to which it belongs.

Still it is a very striking tree, and is sure to command attention from even those but little acquainted with arboreal forms.

The tree is a native of Japan, where it is called, Gin-Ko, and this name was adopted by some of the earlier botanists for its name, and is yet in some catalogues called *Ginko biloba*. When full grown it will make a tree a hundred feet high, though it is many years in reaching that stature, and hence is often planted on small lots, because the owners do not expect to experience any inconvenience in their time from too great a growth, and, of course, do not expect to be much annoyed by what may come to pass after they are gone.

The first plants brought from its native country were all males—the plant having the different sexes on separate plants; and, in consequence, the plants produced no seed. This not only made the plants scarce and dear, but it was difficult to get straight, nice growing trees. The plants had to be made from cuttings and layers, and did not care to make nice, straight leaders, except on occasions.—But of late years the other sex has been introduced. These have been grafted on old trees of the other kind, and the result is, that seed is not uncommon, and good plants at moderate rates will soon rule.

Transplanting Beets.

Few people know that the beet transplants almost as well as the cabbage. Almost all people sow their seeds too thick, through fear that some of the seed will not grow. After they are up they find the plants must be thinned out, but after that there will not be enough left to make half the crop they require. In the case of the beet, the thinnings may be transplanted, and they will make nearly as good roots as if the plants grew where the seeds were sown. All that is necessary, is to take care that the plants do not wilt; and to this end a little watering or shading may be necessary.

Subscribe for the FARMER—\$1.50 a year.

EGG PLANTS.

To have good egg plants, the soil should be very rich and very warm. The plants may be set out two and a half to three feet apart, according to the richness of the soil. Most people set out too soon; the plants get a check from a night or two of cold, and will not produce the "fruit" so soon as good plants set out later. Of course, below us, egg plants are already set out, but in our part of the world, this season, at least, there will be few set out until the present month. In setting out the plants, much time will be saved, if the plants can be kept from withering. The object should be to preserve all the foliage in the transplanted plants. If the leaves die off at transplanting, more will come out, but the plant receives a check, and it makes a difference of, at least, a couple of weeks, in its producing fruit. Of course, after transplanting, they should be well watered, but in spite of this, there will be a withering if the sun comes out very warm the next day. To prevent this, place a large flower pot inverted over the plant during the middle of the day, for a day or two, taking it off, however, early in the afternoon. These pots are also useful to have handy to put over of a cold night, should any occur.

EARTHING POTATOES.

It is yet a question, whether it is a benefit or otherwise to earth up potatoes, or to cultivate them in the flat way. Once, the writer of this, made a fair experiment with half his garden crop on one plan, and half on the other, endeavoring so to halve the lot, as to make each in all other respects equal. The result was slightly in favor of the hilled potatoes.

It is likely, however, that this result would not be uniform in all seasons. It is probable that the season has much to do with it. In a very wet one, it may favor the plants to be hilled, as in this case the roots are dryer at a time when drought is beneficial; on the other hand, if the season were dry, the hilling might have been a disadvantage by permitting of the ground to dry out faster. So, also, much will depend on the soil itself. It may be an advantage to hill up on low or flat land, but an injury on high and dry ones. It is probable, from over-looking the conditions under which the operation is done, that there is so much difference of opinion about the good effects of earthing up.

The Maryland Horticultural Society, will hold its next Monthly Meeting and Exhibition on Thursday, May 20th, 1875. Due notice will be given where it will be held.

POTOMAC FRUIT GROWERS' SOCIETY.

APRIL SESSION—1875.

. This association held its regular monthly meeting on the 6th of April, at the Board of Trade rooms, in Washington, D. C.; Chalkley Gillingham, president, in the chair, and Dr. J. E. Snodgrass secretary.

PEAR CULTURE.

In opening the subject, Col. Hiram Pitts of Washington, read a very instructive paper on the subject, which was listened to with attention.

The president also read an interesting paper on the subject, after which the discussion of the subject became earnest and general, resulting in profitable instructions.

Major J. H. King recommended close planting as affording protection both from cold and heat, Capt. H. D. Smith of Arlington had noticed that the trees usually became cracked and blighted first and most on the south or sunny side, unless protected, the sap becoming suddenly overheated.

Dr. Snodgrass, secretary, spoke a good word for the *Maryland Farmer*, and read from it an instructive article on pear growing, the article on "Three Good Pears."

G. N. Needham read from some paper an article about pear blight.

Capt. Smith thought when a tree had been suffering five or six years it was of little use to apply remedies.

Col. D. S. Curtiss read extracts from the *Gardener's Monthly* and the *Horticulturist*, showing that ashes placed around the roots and forked into the soil, produced great good results. Also, that pear trees, when well grown and bearing, do remarkably well with sod around them, and when mulched in the autumn. He also read a statement of John Taylor, of Elba, New York, whose profits, with three acres of Duchesse d'Angouleme pears, was nearly \$100 a year per acre, for several years, and the benefits still increasing. Mr. Taylor says that his 3-acre pear orchard cost him for trees and planting, with interest on land for ten years, \$1.190; for the first six years he got no fruit, to speak of; but in the 7th year he got 20 barrels of pears, which he sold at \$10 per barrel; 8th year, 180 barrels, sold at \$6 per barrel; 9th year, 220 barrels, sold at \$5 per barrel; 10th year, 204 barrels, sold at \$5.50 per barrel; in all, \$3.502; the variety, were Duchesse d'Angouleme.

CHARCOAL, AND MULCHING.

Major H. C. Williams of Virginia, had been a fruit-grower for many years, found charcoal highly beneficial in promoting the growth of trees and fruit and preventing disease. He made a compost of leaves, ashes and charcoal, and forked it in around the roots. He mulched a good deal with straw, sawdust and other stuff, laid it around the roots in the fall and winter, then in the spring forked it into the soil.

Col. Pitts recommended free mulching as protection against blight and disease.

Capt. Smith confirmed, in his own practice, the advantage of mulching trees and vegetables and small fruits.

In regard to mulching plants Mrs. Harriet N. Nute said she experienced large benefits from

mulching her plants and shrubs with common woods moss; it was ornamental to the pots with no injury to the plants, but was a protection against cold, as well as any excessive heat from the stove or furnace, and preserved a more equal moisture about the plants and flowers.

On behalf of Dr. McKim, a new member, Col. Chase would ask information as to planting a young orchard of pear trees—soil, location, culture, &c.

The president answered that light clay was the best soil; high and dry location sheltered from winds, and a northwestern slope, but protected; careful, clean culture, with light manuring while the trees are growing.

POTOMAC REGION GOOD FOR PEARS.

Mr. Pierson observed that the seckel pear, both fruit and tree, grow larger and finer here than in New Jersey; he never saw so fine seckels in New Jersey as in Virginia.

The secretary, to show that this is a favorable region for the pear, has seen old trees which had withstood every difficulty, and were now bearing good crops of fruit.

Col. W. H. Chase spoke of very old pear trees, at Gunston, Col. E. Daniels' place which are hardy, thrifty, and give a good yield of fine fruit. He is planting a young orchard of pear trees, in that locality, with high hopes, believing it to be a peculiarly favorable region for that fruit.

The president, C. Gillingham, said the even temperature of the seasons rendered this Potomac region so eminently favorable for the pear and other fruits.

Rev. J. A. Buck of D. C. was raising pears, and found the "Howell" an excellent and handsome pear for eating and cooking.

Mulching of trees and grape vines was generally recommended, as well as of field crops.

Pruning pear trees was discussed, and the practice of Prof. Wm. Saunders was almost unanimously approved—that is, the no-pruning plan, except in care of crowding or unsightly branches, which should be cut away and leave the tree to a free natural growth, with branches as near the ground as possible, both to shelter the trunk of the tree and the ground under it.

PEACH TREE YELLOWS.

The subject of "yellows" in peach trees was spoken of. Different views were expressed as to the cause, some thinking insects the cause, and others believing it was a contagious disease, caused by the weather, blight or moisture.

Various wild theories were advanced, and conclusions guessed at, by some members.

Dr. Howland thought it was not wise to jump at conclusions; that it was not safe to rely upon one or two experiments for a conclusion, but that continued experiments and careful observation were necessary to secure reliable results.

Some thought the "yellows" was brought from New Jersey with young nursery trees.

Mr. J. J. Henry had experience in Delaware growing peaches, where they had uniform and profitable crops till the "yellows" struck their orchards and killed them off, as it had done in portions of New Jersey and Maryland.

Mr. Pierson read from a paper some statements from Col. Wilkins, the great Maryland peach grower, in regard to the "yellows" in peaches. He is

making experiments which he expects will discover the cause and cure, and when satisfied will give the result to the public.

Col. D. S. Curtiss stated that examinations which have been made by different parties indicated, that the disease called the "yellows" is caused by immense numbers of small bluish-white insects which look like mold or mildew on the roots, (the *aphis* or *phylloxera*), much like what is found in France on the roots of diseased grape vines. They form in little knots or masses along the roots, extending as far as three or four feet from the butt of the tree or the main vine toward the extremity of the small roots, which they destroy and cause them to die.—Examination has proved a similar phenomenon in Maryland peach orchards, where it has been carefully made.

THE TABLE'S EXHIBIT.

Major Williams exhibited a bottle of very handsome vinegar, made of apple and grape juice, which was pronounced very good.

Mrs. Nute exhibited a pot of very fragrant and beautiful cyclamens.

Stacy Snowden, as he always does, brought a liberal lot of excellent apples, sound and crisp, which he calls the "Spice" apple; others called them the Winter Pearmain.

Major Williams presented fine specimens of the Tewksbury Winter Blush. These apples, both lots, were eaten by the members, and found to be juicy, hard and delicious, and appear to be keepers for months yet—even to the 4th of July.

Dr. Howland stated that there was no difference in the healthfulness of vinegar, whether it was made of apples, grapes or grain, if it had no unhealthy articles put into it. The sour of them all is acetic acid.

On motion, the secretary was authorized to issue postal cards to the members to notify them of meetings.

Dr. E. P. Howland was appointed by the president to read a paper at the next meeting on the culture of the apricot and the peach.

After more than a usually pleasant and instructive meeting the society adjourned to meet at the same place on the first Tuesday in May, when all who desire are invited and will be welcome to participate.

Notice was given at this point that the next meeting of the American Pomological Society would be held in Chicago, Ill., the 8th of September next, and continue three days, and that this and other societies were invited to attend by its delegates.

There was much excellent instruction in Col. Pitts' paper which I can not at present communicate, but will be able to do so at another time; too much cannot be done to encourage Pear Culture; there is no more profitable fruit can be produced; and the country is not yet half supplied with that delicious fruit.

D. S. CURTISS.

BEEF FOR DIPHTHERIA.—A young lady of this village was recently attacked with diphtheria in a virulent form. Slices of fresh pork were bound on her neck without any good results. Her father, hearing that the city doctors were using *beef* extensively for the same purpose, tried it, and in six hours the beef turned green, relieving the sufferer.

—*Riverside (L. I.) News*,

For the "Maryland Farmer."

IMPROVE THE CULTURE.

Upon the cost of agricultural productions depends the profit, when sold in market at ruling prices; and this question of cost is one of the most serious importance to all producers.

The question, how to bring the cost of production to the lowest possible point, and at the same time retain the capital-soil, intact, and increase fertility, is the study of all progressive tillers of the soil. How shall we accomplish this desired end? To answer this question requires large experience, as well as the best judgement, and then it is only answered from a single stand point; and how can it be otherwise? A detailed course which may be applicable under certain circumstances, in one locality, on one kind of soil, etc., may not be applicable in another place of varying circumstances, soil, etc.; therefore, the most we can do, in advocating improvement, is to reason from general principles which have stood the test of experience.

Our own experience, as well as all we can learn from the experience of others, and their published testimony, leads to the unerring conclusion, that to produce agricultural products at the lowest possible cost, at least expense to the soil, etc., we must concentrate our labors, and our fertilizers, so as to grow the largest possible amount from a given area. It costs less to plow one acre well than it does two poorly; so, also, it costs less to apply a given quantity of fertilizers to two acres, than it would the same to three acres, while from the two acres, we can, by concentration, produce more than from the three; we, therefore, make a saving in several ways. First, we save labor, the extra expense of culture, save deterioration of the soil, instead, improve fertility and productiveness; obtain as much or more from the less area, and of improved quality; and, by resting the extra area, give it an opportunity to elaborate new plant food; and, by rotating the soil and crops, we gradually increase productiveness of the whole farm; and, instead of growing poorer, we are, in fact, adding to the value of our possessions.

Agriculture is a branch of business that we cannot depend upon delegating the labor of, entirely. If we wish to make the farm pay, the proprietor must work with his own hands as well as his head—in the words of Poor Richard: "He that by the plow would thrive, must himself either hold or drive."

This question is inexhaustable, and could be amplified to an unlimited extent, but, perhaps, a single suggestion, to incite thought, would be more productive of good, than pages of argument, etc.

GIARDINIERE

WINDOW GARDENING.

Read before the Maryland Horticultural Society at the March Meeting, 1875, by J. EDWARD FEAST.

The subject for discussion, this evening, is Window Gardening, which interests all lovers of flowers, principally those amateurs who have not the means to build green houses, conservatories, &c.

To encourage and foster the taste for Window Gardening should be the aim of all florists, not only for its pecuniary benefits but for the influence it has on every household—as it tends to elevate the mind and make home attractive and pleasing, both to young and old—as Williams expresses it: “Flowers are a spring of sunshine, a constant pleasure, we would have flowers in every home for their sunny light—for their cheerful teachings—for their insensibly ennobling influence.”

The three principal things required to grow plants successfully are light, air, and moisture.—Light is one of the most important agents in the growth of plants, it strengthens the color and matures the growth of both wood and flower—place the plants as near the glass as possible.

Windows having a southern aspect are the best.

Judicious watering is perhaps the most important feature in their management, the best and only general rules which can be adopted, are in winter, keep plants (not then growing) rather dry—in spring, increase the quantity with their activity and the sun's powers—keeping them in a medium state. In summer give water in plenty—and in autumn, decrease the supply with the approach of winter—in fact, never water a plant without it is dry, and then water thoroughly that the soil may get wet to the bottom of the pot—and empty all refuse water in the saucer.

Give *air* every fine day, and avoid a draught.

To grow plants with credit in a window they should be screened from the dry air of the room, either by a curtain or an inside window, as the gas and dust is injurious to the delicate construction of the leaves.

Cleanliness is also essential by syringing, and sponging the leaves—and keeping the plants free from insects.

Keep the temperature of the room as uniform as possible, not lower than 45 degrees at night and sixty and seventy-five during the day; in severe weather remove the plants from the window to secure from freezing, as it injures them even to be chilled, and takes some time to recover from the effect.

There are a great many designs now manufactured, for the window gardener to choose from, or to gratify his or her taste, viz.

The window pots—boxes—jardinieres—plant stands—ferneries—hanging baskets—wardian cases—Etageres—mantel piece gardens—and other designs of great variety—but a plain box fitted to the window sill and filled with foliage and flowering plants—with English Ivy and other vines, trained over the window, surpasses them all in beauty and simplicity.

A glass case projecting beyond the window sashes, on brackets, with a lean to roof, and filled with ferns and flowering plants, are very popular in England, nearly every household has one of some

shape or another, as I have been informed by a lady lately returned from London.

The best display of window flowers in Baltimore, are raised and attended to by a lady, a member of this society. They can be seen at any time on Carey Street, near Franklin Square, which are the admiration of all passers—as the flowers are so attractive no one can resist the temptation to stop, and *admire*. With a little attention every day any person can have the same.

The most suitable plants for a window, facing the north, where they receive little or no sun, are the following:

The common English Ivy, the easiest of all vines to cultivate for indoor use, and which adds more grace to the window than any plant yet used—it will grow both in the shade or sun.

Smilax, another graceful vine, answers best for winter, as it dies down in summer—all kinds of temperate ferns, such as *Nephrolepis Exaltata*—*Lomaria Gibba*—*Alsophylla australis*—*Pteris Argyreæ*—*Doryopteris Pedata*—*Pteris Cretica* *Linata*—*Phebidium Aureum*—*Adiantum cuneatum*—*A. affine*—*A. Microphyllum*—*Achrosticum Alsicorne*—*Lastrea cristata* and *Selaginella Wildenovi*.

Dracæna terminalis and *D. Braziliensis*—always ornamental—*Maranta zebrina*—*Sansiveria*—*Echeverias*—*Sago palm*—(*Cycas revoluta*)—*Ardesia*, *Solanums*, and the following flowering plants: *Camellias*, *Daphnes*, *Myrtles*, *Lily of the Valley*—and for summer: *Gloxinias*, *Achemenes*, *Alocasias*, and *Caladiums*—for hanging baskets nothing is prettier than *Sedum Sieboldii*, *Cordiline vive pare*, *Musk plant*, *Tradescantia*, *Saxifragas*, *Lysimachia* or *Moneywort*.

Plants for an eastern, southern, or western exposure—*Oxalis*, *Chinese primroses*, both double and single, all kinds of succulents, including the *Cacti*, *Fuchsias*, *Petunias*, *Pelargoniums*, *Carnations*, *Geraniums* all kinds—*Azaleas*, *Mignonette*, *Tropæolum*, *Pinks*, *Ferns*, all the *Ivies*, *Marantas*, *Dracæna*, *Begonias*, both foliage and flowering—especially *B. Saundersonii*, *B. Wiltoniensis*, *B. Wiltoniensis alba*, *B. Hybrida Multiflora*, *B. Parviflora* or *dregeii*, and *B. Nitida* or *Semperflorens alba*. *Amaryllis*, all the varieties, *Cyclamen persicum*, *Caladiums*, *Callas*, or *Richardia*, *Cinneraria*, *Verbena*, *Bouvardia*, *Mahernia* or *Hermania Odorata*, *Hoya Carnosa* (the wax plant) *Lantana*, especially *Lantana Elegantissima* or *Sellowii*, a free flowering fall and winter variety, *Echeverias*, *Liliums* in variety, *Triteleias*, a pretty star shaped flowering bulb—*Ixias*, *Sparaxis* and all bulbs known as Dutch bulbs.

Vites or *cissus discolor*, for summer, is a splendid climber for the window—also *Passiflora trifasciata*—both has beautiful foliage.

For hanging baskets, *Convolvulus Mauritanicus*, *Lobelia Gracilis*, *Ivy* leaved *Geraniums*, *Ivies*, *Begonia rex* and its species—*Caladiums*, *Dracæna terminalis*, *Mesembrythemum*, *Sedums*, *Senecio Scandens* or *German Ivy*, *Pilogyne Seavis*—*Martandia*, *Othonona Crassifolia* (a new basket plant) is quite an acquisition—*Begonia glau cophyllum Scandens*, also a new plant, will be in demand both for basket and vases.

Pansies massed together in boxes are pretty and effective.

Forget-Me-Not (*Myosotus palustris*) cut and placed in a glass of water “shaded,” and the water changed three times a week, will grow and blossom the same as if planted in the earth.

Bulbs such as Hyacinths, &c., are much prettier when planted together.

Wardian cases filled with *Dracæna terminalis*, *Diffenbachia seguina picta*, *Cissus discolor* (or *vites*), *Crotons*, foliage *Begonias*, *Marantas*, *Lycopodiums*, &c., have a very pleasing effect when well grown.

Ferries filled with choice ferns, which are dwarf in their habits, over run with *Lycopodiums*, and *Selaginellas*, require very little attention after being filled. For outside window or balcony decoration have a box of rich sandy soil prepared and planted with either of the following vines: *Cobea scandens*, *Thunbergia*, *English Ivy*, *Tropeolums*, *Cissus discolor* or *Marandia*, and *Mignonette*, *Phlox Drummondii*, *Sweet allyssum*, *Nemophyllas*, *Salvia splendens*, interspersed with foliage plants—a box sown with the common *Portulacca*, when exposed to the sun, and when in blossom, is dazzling to the eye.

A balcony on Park street (before the late disastrous fire) used to be attractive with the simple *Moneywort*, *English Ivy* and *Portulacca*.

Bulbs planted, and water cress seed sown on a sponge, kept saturated with water, forms a very pretty ornament to a window—but I would caution any one from using the same, as a gentleman of Baltimore, some few years since, at a heavy outlay of money and loss of time, procured a patent for the principle, and any one using a sponge may come in conflict with the patentee. I would state here it was used in Europe, 30 years ago, and the late Saml. Ault used to decorate his window in the spring with the same.

Also in conjunction with house plants and Ferneries, goes also the aquarium, or river garden.

By the culture of some of our most beautiful fresh water plants in glass aquariums many of the wild beauties of nature in some of her most pleasing and interesting forms may be wrought into attractive decorations of our ordinary rooms, with very little trouble and expense—but this is not the chief object of such aquaria. Their formation has been suggested by the discovery that the growth of aquatic plants will keep the water, contained in such a vessel in a state of purity, sufficient for the healthful existence of all kinds of animal life, of which water is the natural element. It is well known by chemists that plants immersed in water when exposed to the action of light, emit a gas known as oxygen. The knowledge of this principle, is the basis which governs us in the construction of the aquarium, together with the assistance of water snails, who act as scavengers in purifying the water.

In preparing an aquarium, it is requisite, that the paint and cement should be perfectly dry, and entirely free from any unpleasant smell, which would be fatal to many of the animals, if not even to the plants also—use only clean washed sand.—Some plants, however, such as water lillies, "*Nymphæa Odorata*," &c., do better with a layer of fresh earth under the sand—and artificial rock work projecting above the water, and planted with Ferns and Forget-Me-Nots, have a good effect.

The dwarf *Calla* or *Richardia Nana*, makes a good centre plant for an aquarium with plenty of *Valisneria Spiralis* growing among the stems.

When the aquarium has been furnished with its plants and fish, also with snails to consume de-

caying vegetation, and at the same time to furnish a large number of eggs to nourish the fish in the tank—forms a beautiful ornament for a room and especially for a study. The vessel must however, above all things, be placed where it will receive a sufficiency of light, for without that life-giving influence, neither the aquarium nor even the natural lake itself, could carry on its interesting processes.

Light and air, are essential for all animals and plant life.

Suggestions for the Potato Grower.

Johnston Eaton, of Pa., a correspondent in the *American Farm Journal*, offers the following for the consideration of potato growers:

"Any rich, dry soil, clay loam, sand, or gravel, providing it is rich enough to grow a good crop of corn; but let the soil be in good condition, if it is not. Manure with well-rotted barn-yard manure before plowing. A corn stubble ground which has been heavily manured the past year, would be good, or a wheat stubble with little sod. Plow it at least eight inches deep, and if a sub-soil plow has been attached, all the better—unless the soil is a light sandy one. After your ground has been well pulverized with the harrow, take a one-horse plow and mark out both ways, three feet apart.—Let the marking-plow run six inches deep. Have your potatoes cut two eyes in a piece, and drop two pieces in a hill. Now take your horse with the small plow, and turn a furrow over the seed covering it. Then in one or two weeks, or soon as the grass or weeds begin to show signs of growing, go over the ground with a two-horse harrow, harrowing it thoroughly over; and no harm if the ground is harrowed the second time, even if the potatoes have come up. After that use the small, double shovel-plow, going close up to the plants.—The more you cultivate in this way the better. And lastly, when the plants are up eight inches to a foot in height, go through them both ways with a single shovel-plow, with wings attached, leaving the potatoes in nice hills. With this management you need bring no hoe into the field, which is a saving of much hard labor, and you have your potatoes entirely clean of grass or weeds, providing the work has been done in a thorough manner."

A Ohio Farmer correspondent writing on raising potatoes, says:

"It is generally supposed that potatoes should not be planted, at most, more than twice in succession on the same ground. We know of an instance where the ground has been planted for over ten years in succession, and last year bushels of the potatoes weighed a pound apiece.

Put only one eye in a place in drills, 6 or 7 inches apart and 34 feet in the row. A light sprinkle of manure every year was made to the ground, and the tenth crop was as good as the first."

Spots can be taken out of marble with finely powdered pumicestone mixed with verjuice. Cover the spots and allow the stuff to remain for twelve hours; then rub clean, dry, and rinse.

A strong solution of hyposulphite of soda is said to be excellent for cleaning silver.

MONTHLY REPORTS.

The report of the Agricultural Department for March, contains many facts of considerable importance to our farmers, and as most of them are not able to get it, I here reproduce several items for their benefit.

GREEN MANURING.—This operation, of plowing in green crops, for preserving or restoring the fertility of land, is not sufficiently appreciated by those who have not thoroughly practised it on their farms. Buckwheat, clover, pea-straw, sunflowers, and other plants are highly beneficial.

The report referred to above, has the following statements:

"Returns show that the practice of plowing under clover as a green manure is gaining in all sections where clover is grown to any extent. That it proves one of the cheapest and most effectual means of improving soils, and at the same time one of the most valuable fertilizers for growing crops, and especially for wheat and corn. Owing to the value of clover for hay in New England and some of the Northwestern States, buckwheat is not unfrequently used as a substitute in green-manuring. In the South Atlantic and Gulf States, where hitherto but little clover has been grown, the "cow-pea" is used quite extensively, and the reported results are, almost without exception, very satisfactory.

Penobscot, Me., Sullivan, N. H., Berkshire, Mass., Washington, R. I., and Hartford and New Haven, Ct., report the full crop turned under, to a limited extent, with good results. In the latter county it "serves as a good basis for a tobacco-crop," but in Windham it is thought more valuable for hay. In New York the practice is more general. In Suffolk some farmers turn under the full crop with benefit. In Queens, some permit clover to grow till the early part of May and then plow under for corn, with improvement to the land; but sedge-hay from the salt-marshes is frequently plowed under with superior results. One correspondent says: "I have raised 100 bushels of shelled corn to the acre, and our agricultural societies have given premiums to crops of 120 bushels per acre from land manured by sedge-hay raked into the furrows." In Columbia, stubble turned under "improves the soil to a large extent."

In New Jersey, green-manuring with clover is practiced to a limited extent. In Gloucester the clover is mowed and pastured, and the stubble plowed under the second year; in Warren, the stubble only for corn; in Burlington, plowing under the crop is little practiced; the sod is preferred; in Hudson larger crops of corn and potatoes result from turning under red clover.

In Pennsylvania, green-manuring with clover, in connection with lime or gypsum, enters somewhat extensively into a system of rotation in which the culture of wheat, corn, and hay predominates.

In Maryland the practice is extensive; that and commercial fertilizers constituting about three-fifths of all used. The following extract, from very full returns, afford specimens of prevailing processes and results:

Cecil: After mowing and pasturing, the sod is

plowed under for corn, by which farms are very much improved; mine yields double, perhaps threefold, what it did twenty years ago. *Dorchester:* Generally the first crop is cut for hay, then pasture till time for stock to come to the barn; then plow under for corn; the best fertilizer we can get for that, and tells on the wheat-crop which comes after.

From Delaware, Newcastle reports the practice by the best farmers, and with most gratifying results, especially on clay lands.

From Virginia, forty-four out of fifty-four county returns note the practice, either with clover or peas, but in a large majority of instances the extent is very limited. These returns bear concurrent testimony to profitable results to both soil and succeeding crop. In Henrico, the green crop is not turned under, because the hay brings so high a price in the city, and farmers think they cannot afford to wait for the results of plowing under."

CONSTITUENTS OF THE HAY CROP.

The Report shows that of the hay crop in New England the cultivated grasses proper cover from two-thirds to three-fourths of the hay-fields. Of these, timothy (*Phleum pratense*) is the prevailing element. This grass is also called herd's-grass in New England and New York. Red-top (*Agrostis vulgaris*) and occasionally orchard-grass (*Dactylis glomerata*) are cultivated by farmers for hay; not often as separate crops, but mingled with timothy. Blue-joint (*Calamagrostis canadensis*) is casually mentioned as growing in some meadows in Maine. Of fodder-plants, besides grasses, red clover, (*Trifolium pratense*), white clover, (*T. repens*), and alsike clover, (*T. hybridum*) receive some attention, but are seldom found growing alone.

The Middle States manifest a preference for clover-crops, which cover nearly a third of the hay-fields. The largest proportion of hay from wild grasses is made in Pennsylvania, amounting to about 20 per cent. of the whole; in New Jersey it constitutes less than one-eighth of the crop, and in New York about one-sixth. Of the cultivated grasses, timothy is the chief reliance, though mingled with orchard-grass, blue-grass, (*Poa pratensis*) Hungarian-grass, (*Panicum Germanicum*), and red-top. Red-top, in Pennsylvania and in regions to the south and west, is frequently called herd's-grass.

Of the South Atlantic States, our returns indicate that probably the larger portion of the hay-crop of Maryland is made from clover, while a smaller proportion is from wild or natural grasses than in the New England or Middle States. In Virginia, timothy and clover are in about equal use, while wild grasses come in for a much larger share of the hay-crop than in Maryland. Of cultivated grasses proper in these two States, timothy is the staple, with an occasional mixture of orchard-grass and red top.

FEEDING-MATERIAL.—The staple of winter-feeding throughout the country is hay, either timothy or clover; but the demand for this material in the towns and cities induces farmers in many portions of the country to stint their own animals in order to realize the high prices it commands.—It is a ruinous practice to carry hay, straw, or fodder off the farm, unless plenty of roots are raised to feed a good number of stock to eat it and fertilize the land.

D. S. C.

The Floweret's Warning.

BY J. E. SNODGRASS.

I'm withered now! Erst 'neath the sun
I bathed my petals, while the rain,
Dropping its glistening gems upon
Yon garden, bade it smile again.

Then, never sad, drooped not my head,
As when in this close room I stand;
The dew my drink, I freely fed
On food prepared by Nature's hand.

Alas! those joyful hours are gone,
And with them all of floral bliss,
And here I'm let to pine alone—
Oh! what a cruel change is this!

Take warning, fair one, who dost live,
Secluded from the light of day;
Dream not that Nature will re-give,
Health which the recluse flings away!

A Chat with the Ladies for MAY.

BY PATUXENT PLANTER.

"There came a sound on the softening air,
Its cheery welcome notes to hear;
'Twas the voice of SPRING, as it hastened along,
With ripple and murmur, and sweetest song,
Of the bird's gay notes and gushing flow,
Of the wandering brooks as they ceaseless go,
Stirring the heart with mystic power,
Casting a charm o'er the passing hour."

"MAY, the bright maiden, singing goes,
To where the snowy hawthorn blows,
Watching the lambs leap in the dells,
List'ning the simple village bells."

May, the loveliest floral month of the year, is ever associated in my mind, with the old time May-days of boyhood and girlhood in rural ramblings for wild flowers, and then the dance about the May-pole on the village or school-house green, with the May-ball at night, where the juveniles were want to indulge in the mazy dance and visions of future happiness; courting and flirting, as imitators of their elders. Boys in pumps and silk stockings, white pants and vests, and blue coats, and the girls all in white with wreathes of flowers on their heads, surmounting the unbound curls. At those festivals, many a young heart consorted and plighted their troth, each to the other for life—long weal or woe. Oh! those happy, glorious May-day festivals of the olden time! We see, nor hear, not of them now, as the seasons have so changed, that the May-pole and May-ball are discarded by nature; no longer is it to be enjoyed by our young folks, the great exciting pleasure of canvassing, first for the election of a May Queen, and then for an especial partner for the day. Gone! Gone! but we may as well recall those pleasant memories, they are at least harmless, and refreshing for the time, at this season, to us who have grown old, but love memories of the past.

Some of my young readers may like to have a hanging garden of sponge. It is a pleasing novelty. Take a large sized white sponge, and sow it full of rice, canary, hemp, grass seeds, &c.; plant it in a dish in which a little water is constantly kept, and, as the sponge absorbs the water, the seeds will sprout in a few days. When this has fairly taken place, the sponge may be suspended by cords, in a window where a little sunshine will enter. It will thus become a mass of green and variegated foliage, and should be refreshed daily with a little water, not too cold.

Hanging Baskets of flowers, are appropriate in the country, only in winter, but in town, where the denizens have no ground for flower beds, or even for flower stands, they are objects of attraction and beauty all the year round, and are becoming indispensable. For, without the window garden, warden case and vases and baskets, few town families could enjoy the pleasures derived from flowers either in winter or summer. True, bouquets can be bought, but at a high price, if they really be worth buying at all, and they fade almost as soon as the grass of the fields, which cut in the morning is withered before the evening. So our rural ladies need just now not bother about hanging baskets or house plants.—They must think about now, if not done before, at an early day procuring a plenty of first rate roses, of all the decided colors, such as Louis Phillip, or Marshal Neil, red, Hermosa, pink, Madam Bosanquet, flesh color, Lamarque, pure white, Saffrano, remarkable for the exquisite beauty of its buds. But I will mention no more; these older sorts being among my favorites. You will, of course, consult some of the catalogues, for the newer and more fashionable sorts, among these are some superb specimens, distinguished for various qualities. But neglect not in your collection, to have one or more of the Prairie Roses, which were introduced by the veteran Baltimore florist, Jno. Feast, the oldest, and one of the best in this country. Mr. Halliday and others, of Baltimore, have offered this year some superb roses, and other new and rare plants. It is said that *onions* are sure to increase the fragrance of flowers, and make of superior quality, the water distilled from roses grown on a bush near which an onion has been planted. Take a large onion, and plant it close to a rose bush, so as to touch its roots. This is a simple matter, and it might be tried easily by experimenting on one or two bushes of same kind.

Roses will flourish in almost any soil, but delight in loam, or a soil not stiff enough to bake. On the latter soil, open a good sized hole, remove half of the clay, and supply its place with leaf mold, coarse sand, and rich mold from the garden or fence corners, or rotted sods, in equal parts, and intermix the clay remaining in the hole, then plant, and with proper after culture you will be proud of your rose bloom.

Among the bedding out plants, the best is the verbenas in varieties, and the coleus for its peculiar style and colors. This last looks best as edging, or better when planted in a circular mound, the first row pure white, the next of the darkest color, and the balance with different varieties, the tallest nearest the centre, in which have a Canna or Dahlia, or some sort of tall growing grass like Pampas, &c. I have seen such beds on a lawn that were highly ornamental.

Neglect not the ever desirable geranium, in its numberless varieties, and the pelargoniums, they are never amiss on the flower border, or in pots in the windows, or on flower stands. Of the latter, some new ornamental stands have been introduced, and are very handsome in or out of the house.

GENUINE PERUVIAN GUANO.—We call attention to the advertisement of R. Balcazar, New York, who is Special Agent for the sale of Peruvian Guano, in large or small quantities, at lower rates than from the Agents of the Peruvian Government. We are assured of the thorough reliability of this Agency. See advertisement.

WORDS OF CHEER.

To the Editors of the Maryland Farmer:

Receive my congratulations. Your April issue is emphatically a treat. It is literally crammed with good things. I think Col. Mills was fortunate in associating Mr. Wilkinson with himself and Col. Bowie on the editorial staff. His hand is seen to the advantage of the *Maryland Farmer* and its readers, in several of the articles in your last, which are brimful of solid facts, and maxims of sterling value.

I am glad, also, to observe that you have the valuable aid of my predecessor in the Secretaryship of our "Potomac Fruit Growers' Association," Col. D. S. Curtiss. He is a wide-awake observer, and will add many a useful item to your store from month to month. It was his reports of our proceedings, for the publication whereof, I return thanks in behalf of the Association, that induced me to subscribe to the *Maryland Farmer*, and the same was the case with others. I am sure I am in the Colonel's debt, for being the means of introducing the publication to my notice. I knew there was such a periodical published in Baltimore, but had inferred that it was conducted after the old fashion of a quarter a century ago. I am truly glad to be undeceived by the freshness and vigor of your work.

I find in my portfolio a brief poem, of which I send you a copy. It has long remained there unused. It may do to head your monthly "Chat with the ladies," which adds so attractive a feature to the magazine. And possibly, it may inspire some house-plant-like sister, who needs light and air as much as her flowers, to betake herself for the first time to the cultivation of a flower garden for health, if not for profit also. Why should I not suggest an occasional morning turn in the vegetable garden as well?

J. E. SNODGRASS.

Washington, D. C., April 2, 1875.

ACKNOWLEDGMENTS.—Our thanks are due to Mr. C. W. Hall, of Spring Grove Asylum, for a present of six monstrous large heads of superior lettuce, and a single stem of geranium, on which we counted twenty-six beautiful flowers, forming an immense truss of crimson bloom, as large as an ordinary bouquet—and these were received as early as March, 23th last. We shall be pleased to have Mr. H. continue his interesting contributions about Horticulture and Floriculture in the *Maryland Farmer*.

We are greatly indebted to Messrs. Briggs, Seedsmen and Florists, of Rochester, N. Y., for three splendid chromos, which we have never seen surpassed in artistic execution, and the taste displayed in the selection of the flowers represented. They are framed.

BEAUTIFUL CATALOGUE.—D. M. Ferry & Co.'s Seed Annual, 1875, Detroit, Michigan. Among several splendid Seed Catalogues we have received, this is one among the best. It is most profusely illustrated, and has two beautiful colored lithographs, one of a new melon, and one being a group of the new Pansy, Emperor William. The reading matter is valuable, and the articles on the Vegetable and Flower garden are elegantly expressed. It should be in the hands of every one who delights in the useful and the beautiful.

United States Centennial Commission.

INTERNATIONAL EXHIBITION, 1876, PHILADELPHIA.

BUREAU OF AGRICULTURE.

CIRCULAR.

The Centennial Commission realizing the importance of the Agricultural interests of the United States, and anticipating the demands that will be made for a proper representation in the International Exhibition of 1876, is making ample provision for the accommodation of this department.

It has been organized as one of the Bureaus of Administration of the Exhibition, and will comprehend the native and cultivated Products of the Soil, and of objects more directly derived therefrom, Agricultural Machinery and Farm Appliances.

The Building, most eligibly located in Fairmount Park, will cover ten acres. There will be provided, also, ample and suitable accommodations for the shelter and display of Live Stock, which it is intended shall be exhibited during the months of September and October.

The Exhibition will open on the 10th of May, 1876, and it is therefore necessary that those who desire to exhibit cereals, forage-plants and tubers, should make their preparations during the present season.

This Exhibition being International, will bring together for comparison, the best products from every quarter of the Globe;—hence, every effort should be made to give just evidence of the capacity of the varied climates, soils, skill in tillage, and the character of the Live Stock of the United States; whilst the Mechanical aids to Agriculture should exhibit ingenuity, excellence of workmanship, and adaptation to desired ends. The classification will more fully make manifest the arrangement and comprehensiveness of this department. Applications for space should be made as early as practicable, on the forms which will be furnished by the Chief of this Bureau.

The prompt co-operation of State, County and other Agricultural organizations, as well as of all individuals interested in the practice of Rural Science, Stock-breeding, and Forestry is earnestly solicited.

A. T. GOSHORN, *Director General*.

BURNET LANDRETH, *Chief of Bureau of Agr.*

From F. W. Helmick, Music Publisher, Cincinnati, Ohio, a new Song and Chorus, called "Sadie Darling." Words by John T. Rutledge—music by Chas. Baker. We like both poetry and music, especially after our musical editor, who was assisted by the entire editorial corps, sang in his usual sweet, Jenny Lind, artistic manner:

Sadie, darling, pretty flower,
Do you not remember well,
In your little cot of roses,
Loving stories we did tell;
Where the merry birds were singing,
Blithe and merry in the dell,
Where so oft we sat together,
For we both were loving well.

Both of our widowers became "paroxysmally" affected, when allusion was made to the "little cot of roses," as it awakened in their tender breasts their early recollection of "love among the roses"—the junior is stolid—neither emotional or gushing.

THE STATE AGRICULTURAL COLLEGE.

It is always unfortunate when public affairs cannot be separated from personal interests, and when we cannot bring to their consideration minds unbiased by private griefs or partizan prejudices.—There has been too much of this we fear in the late dealings with matters pertaining to an important Institution, the Agricultural College.

Divesting the facts of chief interest of the superfluous matter which has attached to them, and showing them as they are, without the distortions and exaggerations of prejudice, they seem to be about as follows. First, a debt of \$10,000 at the utmost, of which \$4,500 was made during the last year of Mr. Regester's administration, and the remainder within the two years succeeding. This debt is not in one sum to be regularly provided for by payment of interest and a sinking fund, nor has its further increase been provided against by reducing the scale of working expenses. The ten thousand dollars is distributed among unnumbered creditors, all pressing their claims, and the Institution is worked and large current expenses provided for, under the infinite disadvantage of damaged credit and angry creditors. An individual of ordinary intelligence and prudence would, long ago, have taken steps to stop all this. He would have gathered his debt by any practicable means into one sum, and would have brought his working expenses within his clearly ascertained income. These things were attempted, but not accomplished because of divisions in the Board of Trustees.

The next important fact is the falling off in number of students. In this the College has suffered in common with other similar institutions, owing, it is believed, chiefly to the extreme pecuniary pressure of the past year. One other popular Institution within the State, of which we happen to know, has lost, within the year, largely more than fifty per cent. of its numbers.

The next fact, is the alleged failure in the department of agricultural instruction. This seems to be acknowledged on all hands, and is one of the charges made by those who follow the late President of the Board. Where is the fault? An ample course of agricultural instruction is laid down in the published programme of studies; a special chair was instituted two years ago in addition to the existing chair of Natural Science, at the urgent solicitation of the late President, and the chair was filled by a gentleman, on the sole recommendation of the late President. It was thought due to his zeal in this behalf to accord to him what he asked.

As much has been said in regard to the Profes-

sorship of Agriculture to the College, we would ask here, when and by whom that chair has been filled for the last seven years, embracing the term which the late President occupied that position. We are not apprised that there ever has been a Professor of Agriculture to the Maryland *Agricultural* College. It is a notorious fact that while the other chairs have been filled the *Agricultural* chair has been vacant until very recently. Where rests the responsibility? As far back as January, 1873, we called attention to this lamentable defect in the management of the Agricultural College, and expressed views similar to those which we do now. We then spurned the idea of an *Agricultural* College, with no one filling the Agricultural Chair.

We pass now to another topic, which we can hardly treat with the gravity that becomes us. We mean that part of the President's published statement in which he warns us of the "great peril" which threatens "agricultural and industrial education," and that many "interests," and "personal rights" and "State rights" are "subordinated" by some "new programme," to the "Naval and Military organizations of the United States." We will not suggest "clap-trap" or "buncombe" in this connection. Our respect for the venerable late President, forces upon us the conviction that he is really very much scared. He is an un-military man and un-nautical, and wading in these waters, some "spirit from the vasty deep," has come to trouble him.

Simply the "new programme," which so alarms the President, and with which he proceeds to alarm "the common mind," as he calls it, is this: The Trustees have authorized the reception at the College of boys who wish to take a course of preparation for the U. S. Naval and Military Schools.—That course consists of reading, writing, arithmetic, algebra, English grammar and geography. In other words, just what other boys learn in the preparatory school of the College. There is plenty of room for them, plenty of teachers to instruct them, they have the same fare and accommodations of every sort, and, as they come from outside of the State, they pay tuition fees which Maryland boys do not. This is the "new programme."

But, "in the night, *imagining* some fear,
"How easy is a bush supposed a bear."

We have not learned that it proposed to build any miniature gun-boats, and launch them in the ice pond at the College, with which to practically teach Naval Science.

Mr. Davis in his publication intimates, without asserting, that objection was made to admitting to the Board the State's Representatives. Mr. J. Howard McHenry, in an article in the same jour-

nal, states, "there has been inconsistency in recent legislation, in consequence of which it has puzzled, I say it with due respect, the highest law officer of the State himself to designate the individuals on whom devolves the responsibility of representing the State in this Board." This indicates the only difficulty about the State's Representatives. No one knew who they were.

The President, at the meeting of the stockholders on the 14th April, used his position as President of the retiring Board, to read what he called a report, and so to get it published as part of the proceedings of the meeting, accusing violently the President of the College. As his action was not authorized by the Board he claimed to represent, the meeting refused to receive his paper, but it was published nevertheless as from the President of the Board of Trustees. It contained charges made to the Board, canvassed in the Board, and settled there in Executive Session. Mr. Davis has appealed from the Board to the public and to the stockholders. The decision of the latter is recorded in the vote for a new Board.

In conclusion, we confess we cannot see any just cause of alarm, or of "great peril" to the stockholders of the College, or to the tax paying citizens of the State, on account of the so called "new programme." The expenses of the College are not increased by the introduction of a course of instruction by which to prepare the students of the college for the U. S. Naval and Military Schools, so long as such instruction is given by the present faculty. So long as there is ample room in the College, and non-residents are admitted who are willing to pay for tuition, what impropriety can there be in carrying out the character of instruction required by the letter of the charter. Let us have a Chair of Agriculture filled by the best man we can get, and we have confidence in the ability of the new Board to soon work the status of the College up to that standard, that will satisfy every unprejudiced mind.

We should all remember that we are now and have been laboring under a financial pressure that reaches our schools as well as business of every nature.

COMMISSION BUSINESS.—This business, with the best houses, seems to be pretty lively, in Washington—even reviving with the reliable business men.

I stepped into the fine new store of C. F. Wilkins & Co., Louisiana Avenue, where I found large quantities of fine fruits, vegetables, &c. I know them to be most reliable business men, and they are paying subscribers of the *Maryland Farmer*.

D. S. C.

MARYLAND AGRICULTURAL COLLEGE.

Reply of the President of the College to the President of the Board of Trustees.

To the Editors of the *Maryland Farmer*:

Will you allow me, through your Journal, to notice two letters that appeared in the April number of the *American Farmer*, on the subject of the Maryland Agricultural College, one written by the President of the Board of Trustees, the other by an active member of that Board.

The latter gentleman has been for some years an active member of the Board, who has given much thought to the subject of Agriculture and Agricultural Education. It is, therefore, with regret that I have to differ with him in opinion. He proposes, if I understand him correctly, to convert the College into "a working school of agriculture combined with a school for instruction in the necessary branches of Elementary Education," and that its efforts be directed "to the training of children in the practical knowledge of agriculture and of Arts and Sciences intimately connected with it." If "children" cannot be induced to attend such a school in any other way, he suggests that they be received, not only free of charge for tuition and the use of books, as is done now, but without charge of any kind. In other words, to give them board, books and tuition gratuitously. Such an institution might perhaps be a deserving charity school; but did the founders of the College, its charter, and the act of Congress 1862, known as the Educational Land Grant Act, contemplate the establishment of such a school? If they did, they certainly commenced with a misnomer, for an institution of that grade could in no just sense be termed a College.

The founders of the College designed to inaugurate an institution of learning, where the youths of the State, whilst receiving a liberal education to prepare them to perform well their parts as citizens of the State in whatever position of responsibility they might be placed, should at the same time receive thorough instruction in Agriculture and all relating to it. The stockholders subscribed their money to establish such a college. This purpose is set forth in the preamble to the Act of Incorporation of this college. The act of Congress of 1862 under which it receives more than one half of its endowment, expressly provides that the money shall be "inalienably appropriated to the endowment of at least one COLLEGE where the leading object shall be, without excluding other scientific and classical studies, and including *military tactics*, to teach such branches of learning as are related to Agriculture and Mechanical Arts," "in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions." Surely "a working school of Agriculture combined with instruction in the necessary branches of elementary education," would fall very far below the College here indicated, so far that to convert this college into such a school would seem to be a diversion of its property and endowment from its legitimate purpose.

There are many other objections to the proposed change, but to point them out and give my views fully on the subject would extend this to greater length than would be admissible in a single num-

ber of your journal. Perhaps with your permission I may recur to the subject again. I will only add in that connection that to adopt the plan proposed by the writer I am referring to, would, in my opinion, not only wholly fail to carry out the laudable purposes for which the college was founded and endowed, but would insure its speedy ruin.

Instead, therefore, of so radically lowering the standard of the college, every effort should be made to elevate and improve it, and extend its sphere of usefulness, to make it what its founders and the laws by which it exists designed it to be, an institution of learning where any parent or guardian might feel assured that a son or ward would receive not only thorough instruction in Agriculture and the arts and sciences pertaining to it, and to other industrial pursuits, with a "Model Farm" in the highest state of cultivation constantly before his eyes, but would receive at the same time a liberal education and prepare himself to perform well the duties of a citizen in any position to which, in a free State, he may be called.

The President of the Board of Trustees says that this college "was founded especially for the sons of farmers and mechanics." I had supposed it was founded and opened to all,—the sons of Lawyers, Doctors, Merchants and others who contributed much the larger part of the money for its foundation. But suppose it was founded "especially," or even *exclusively* for "the sons of farmers and mechanics," are they to be cut off from the "liberal education" which the laws by which it exists designed to provide for them? Are they not fired by the same ambition that animates other youths?—Would it be just? Would it not rather be cruel, to provide for them such meagre mental training as would place them at so great disadvantage in the battle of life, with other and more fortunate youths? Intelligent farmers and mechanics would not send their sons to such a school. If they could spare their labor at home, and afford to pay their board at a college, they would prefer one where their sons would receive, in addition to special instruction in agriculture or other industrial pursuit, a liberal education, and stand fairly with others, well trained mentally and physically, to run the race before them. Some years since three youths, the sons of farmers, one in New Hampshire, one in Virginia, and one in South Carolina were receiving their training in schools and colleges open to all, and not many years later they had elevated the standard of statesmanship in this country to a higher point than it has since maintained, and as Clay, Webster and Calhoun, were leaders of Senates and Cabinets. Let us give the sons of farmers and mechanics, and others, a fair opportunity of emulating their example.

That may be done at this college. It possesses many advantages. It is admirably and healthfully located in a State possessing natural advantages that are excelled by none. It is easy of access from all parts of the country; in close proximity to Baltimore and Washington, and in full view of the thousands of travellers over the Washington Branch of the Baltimore and Ohio Rail Road. It would seem that a natural and laudable State pride should prompt those who have it in charge to make both the college and the farm, models of excellence, alike creditable and useful.

That was the task I proposed to myself when I

accepted its Presidency, and here let me say that though the circumstances under which I became connected with it may be of no interest to the public, I do not choose that they shall be misunderstood. Every Trustee knows that I hold my present position through no agency of mine. So far as I know my name had never been mentioned in connection with it until the Trustees were actually balloting for a President, when I was nominated and unanimously elected in a full Board. The first intimation I had of it was through an extract from a Baltimore paper which I read in California, where I was at the time filling a chair in the University of that State.

When officially informed of my election, I replied that if the Trustees proposed to continue the college as it was then organized and managed, I would not connect myself with it; but if they desire to improve and make it more in accordance with the requirements of its charter, I would accept the office to which I had been called. My services were accepted under that declaration.

I have been at its head little more than eighteen months. If it is asked why I have not made of it what I proposed, I reply, mainly because I have not been provided with the necessary means, and my views conflicting with those of the President of the Board of Trustees have been opposed and thwarted by him.

To detail the various obstacles that I have encountered would be as tedious and distasteful for me to write as for others to read. One of my efforts has been so strangely and unaccountably misconstrued by the President, as appears by his letter in the American Farmer for April, that I must notice it at some length, and, in justice to the college and myself, endeavor to remove the erroneous impression the letter, however unintentionally, is calculated to produce.

He says that the "industrial and agricultural interest" as affected by this college, have been "subordinated to the military and naval organizations of the United States." If so, it has been done without my knowledge, and I venture to say without the knowledge of any Trustee other than the President himself. In support of his assertion he refers to the action of the Trustees in inviting three professors, one of them, the Professor of Agriculture, to resign, and to a circular printed last October announcing certain additions to the course of instruction, and that special attention would be given to preparing candidates for admission to the military and naval academies.

The invitation to the professors to resign, by no means implied that the branches of learning they taught were to be discontinued. If that had been the purpose, the readiest and most obvious way of accomplishing it, would have been to abolish the chairs. Retaining the chairs, and inviting the occupants to vacate them, would seem to imply that it was either intended to refill them, or make some other provision for giving the instruction. However, no great harm was thereby done to the agricultural interest, as the professors referred to did not accept the invitation to resign.

But this new instance of the subordination of the Civil to the Military has, it seems, been accomplished by the circular or advertisement, and especially the part of it referring to candidates for the Military and Naval Academies,

"It is," says the President of the Board of Trustees, "*an accepted rule of law, that a local, special act takes precedence of a general law, so all subjects give way when the special comes in conflict.*" From which rather forced simile it seems that, in his opinion, a circular issued by the President of the College, takes precedence of its Charter and the laws passed for its government; just as, according to the same rule of law, an order issued by the superintendent of a rail road would take precedence of the general laws of the State with which it might conflict. Did he entertain that opinion when, as ex-officio President of the College, he issued the Circular for the year, announcing among other things that "special instruction, for all who may desire it, will be furnished at professor's rates in Phonography, Telegraph and Music." But I am concerned now with a question of fact rather than of law.

This imaginary subordination of the civil to the military has been accomplished, and the industrial and agricultural interest thereby brought into "great peril," and he washes his hands of all responsibility for the mischief. Let us see on what ground. The following are the facts:

At the regular meeting of the Trustees, in September last, the chair of Mathematics was filled. The accomplished gentleman selected was a graduate of the U. S. Naval Academy—was for several years Instructor in that institution, and had served long in the navy and merchant service. I suggested to the Board, that in addition to mathematics, he was admirably qualified to instruct in navigation, seamanship, and all pertaining to nautical science, and to prepare candidates for admission to the Naval Academy. That the addition to the college curriculum of such a course of instruction would render it more attractive, and extend its sphere of usefulness. I pointed out, too, how it might be made to increase the college revenue, which was an object much desired. The proposition was favorably received; no objection was made, and, on motion, the gentleman in question was elected to fill the chair of mathematics, "and to perform such other duties, as in the discretion of the President of the college may be assigned to him," meaning thereby the nautical course above referred to.—The records show that the resolution *received the vote of every member present, including the President of the Board.*

Again, on the 22d January, at a special meeting of the Trustees—the President of the Board being present—a resolution was passed unanimously, authorizing me to receive students, "*non-residents of the State of Maryland,*" applying for special instruction, and to charge them at the rate of \$40 per month. If, therefore, the industrial and agricultural interests have been brought into "great peril" by this action of the Trustees, it is not seen how the President of the Board can escape his share of the responsibility.

But, in truth, no interests have been imperiled by that action, nor subordinated to the military and naval organizations, nor has there been the remotest purpose to do anything so preposterous. The circulars were prepared to make known and carry out the purposes of the Trustees, and to them, first of all, were copies sent. Not one of them intimated to me, in any way, that they were objectionable, and it was some weeks before I

heard incidentally, that at a special meeting of the Board, objection was made to them by some members. I ceased to circulate them, and at the next meeting, early in December, I reported, that in deference to the opinions of those who objected to them, they would be withheld until further action of the Board. They are now lying in the office, and the Nautical course has not been introduced into the college.

Under authority given me by the second of the above mentioned resolutions, students desiring to prepare to enter the Naval Academy have been received. But they would have been received if that resolution had never passed. Under the regulations, made by the Trustees for the government of the college, I would have had no authority to reject them. There is no regulation prohibiting the reception of students who propose to go into any particular pursuit. The resolution, in effect, does nothing more than to provide, that such students, non-residents of Maryland, shall pay a moderate tuition fee; whereas, without that resolution, they would have been received as other students are—free of charge for tuition.

The President of the Board of Trustees asks, "*who in the nature of things, is likely to receive the most benefit and attention.*" Under this arrangement, the student who pays forty dollars per month, or the student who pays only twenty dollars per month?" The question might well imply an imputation on the integrity of the faculty, which I am sure was not intended. I answer that the professors, having a proper appreciation of their duties, will make no distinction whatever, but give equal attention to all, and to all, the attention they need. What possible motive have they for doing otherwise? The tuition fees go into the college treasury, no part of them whatever, goes to the professors, who receive their salaries from a different source. This reception of special students was designed to benefit the college in various ways, especially to add to its revenue. The only effect it has on the professors concerned, is to impose upon them additional labor. Not that those students are taught any thing that is not taught to the others, for so far as it goes, their course is identical with the course of instruction prescribed for the Freshman class, before I came here—but it obliges the professors to go over again and again, as these new students arrive, the same part of the course already gone over by those who have preceded them. The additional labor was assumed not only without additional compensation, but under a reduction of salary, simply to advance the interest of the college.

The only foundation, then, for this assertion that the "Industrial and Agricultural interests" are subordinated to the military and naval organizations, is that there are here now, *by the approving vote of the President of the Board of Trustees, who makes the charge*, a few youths who are preparing to enter the Naval Academy, and pay a moderate tuition fee. With as much justice, might it not be charged that other interests have been subordinated to the profession of law, medicine, the church or commerce, because there has always been here students preparing for those pursuits? The influence of the special students now here is most salutary, because their appointments to the Naval Academy are conditionable upon their passing the

preliminary examination. They have, therefore, strong *immediate* inducements to study diligently, and to discourage in others idle visiting and lounging, which would interfere with study. They can, in no possible way, impede or interfere with agricultural or any other instruction. They have helped to bring the college more into notice, and to make known the advantages it offers, and they add materially to the revenue, and will continue to add to it, greatly to the benefit of the college, unless interfered with by injudicious and prejudiced people. But for the opposition it has encountered by some in authority, and the consequent suppression of the advertisements, there would, probably, be here now double the present number, thus doubling the clear increase from that source.

The proposition to add to the College curriculum a course of Nautical instruction has been misunderstood, and therefore misrepresented. It was designed to meet a want which it was believed was felt in the system of industrial education. By a recent act of Congress the Secretary of the Navy is authorized to place at the service of the city of Baltimore a ship, thoroughly equipped, as a School or Training Ship. The City Boards of Trade and Education had taken steps to profit by the law, and organize such a school.

It was thought that this College, and the Training Ship, might aid each other. Youths receiving theoretical and technical instruction here might be received on the training ship for practical instruction during the summer. On the other hand, youths of the training ship who by conduct and capacity might merit it, would be received at the College for theoretical instruction and general mental culture. The plan, if adopted, and wisely carried out, would, I believe, result in great benefit to the mercantile marine, especially of the City of Baltimore. I thought, and still think, that by attracting to, and uniting other interests with, this college, it would be rendered all the more able to accomplish its "leading object," namely, "instruction in agriculture and the arts and sciences relating to it." But it has been successfully opposed. It has even been ridiculed by the President of the Board of Trustees and others, under his immediate influence, with more wit than wisdom, and the wit keeps them infinitesimal.

"The thing," says the President of the Board, "to the common mind, unfamiliar with the subject, seems supremely ridiculous."

However it may appear to such a mind, to minds differently constituted it appears in a very different light. The distinguished President of a flourishing university, a man of the age, of large experience in the organization and management of institutions of learning, writes me, that he regards it as an "excellent idea," and adds, "I have always held that the Congressional grant of 1862 was not for a purely agricultural school, but for a school of modern applied science, and I rejoice at every sign that this construction is elsewhere placed upon the terms of the law." The Commissioner of Education of the U. S. expresses his approval of it.—Special chairs of Nautical science have been added to a college in New York and to the Massachusetts school of technology. In California it is strongly urged that such a Chair be added to the University of that State, and a gentleman of San Francisco has offered to endow such a chair, if it cannot be

added in any other way. Sustained by such a weight of authority I feel little concern for minor objectors.

"Better to err with Pope than shine with Pye." Why should a youth, the son of a farmer, mechanic, etc., who desires to enter the merchant service, and before doing so proposes to acquire theoretical knowledge and general mental culture to fit him to rise in his vocation, be turned away from here, and told that if he desires such knowledge he must leave the State and seek it in New York or Massachusetts.

That is what we are doing now, because of opposition, which I must regard as unwise and unreasonable. Applicants for such instruction are informed, that owing to some difficulties, that branch of learning is not given here, though the Professor of Mathematics, than whom no one is better qualified, has volunteered to give it in addition to his other duties, without additional compensation.

The friends of the college may rest assured, that the Civil has not been subordinated to the Military and Naval interest, and that there is no disposition on the part of any one to subordinate it. On the contrary, it is earnestly desired to improve the college, and make what its charter and laws, by which it exists, designed it to be, a "college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to *agriculture and the mechanical arts*, in order to promote liberal and practical education," in the several pursuits and professions.

SAM'L JONES,

President Maryland Agricultural College,

APRIL 9, 1875.

Maryland Agricultural College—Election of Trustees.

The annual meeting of the stockholders of the State Agricultural College, was held Wednesday, April 14th, at the office of the State Agricultural Society. There were present the President of the Board, Hon. A. Bowie Davis; J. Howard McHenry, James T. Earle, Otho H. Williams, Charles B. Calvert, Ezra Whitman, Wm. B. Sands, Professor Worthington, of the College; S. Sands Mills, Hobart Hutton, F. A. Soper and R. D. Williams, representing in person or by proxy about 6,000 shares out of 8,000 owned by the stockholders. The meeting continued in session until about 6 o'clock in the evening, and finally resulted in the election of a new Board of Trustees.

The meeting was called to order by Mr. Davis, on whose motion, Mr. Otho H. Williams was called to the chair, and Mr. F. A. Soper appointed Secretary. On motion, a committee of three, consisting of Messrs. Earle, Worthington and Calvert, was appointed to ascertain if there was a quorum of stock represented. The examination of the proxies of stockholders was begun, consuming about three hours, a number being rejected for informalities of one kind or another. It was finally ascertained that 5,778 shares were represented in person or by proxy.

Mr. Davis, President of the Board of Trustees,

asked, at this stage of the proceedings, to submit a report, which began as follows:

"The present unfortunate condition of the college, and the circumstances that have produced it, demand from the President of the Board a specific report. In this report, three points require brief notice:

First. The condition of the college in 1873.

Second. The condition now.

Third. The causes of the lamentable deterioration which will thus be made manifest."

Upon these points, the report of President Davis, of the Board of Trustees, elaborated and charged chiefly the present unfavorable condition of the college to the inefficiency of its President, Gen'l Jones, which was rebuked by Mr. Earle, with his usual courtly manner, as wrong, in the absence of the President of the College, especially as it was the individual report of the President of the Board of Trustees, not endorsed by the majority of the Board. Mr. Calvert sustained this idea, and contended that it was not an *official* paper, or, if official, unendorsed by those who had the same right to censure or praise as the President of the Trustees had. Mr. Calvert was energetic, and closed his objections to the further reading of, or at least, to the adoption of the Report, as not being an *official* document, with the forcible remark, that "there were two gentlemen, at present in the Board, that had been requested to resign, and would have done so if they had been men of honor."

Mr. Earle then again argued forcibly and eloquently against the reception of the Report.

Mr. Davis regretted his physical inability on the occasion to reply to Mr. Earle, but however unpleasant it was to himself, the Report he submitted, was written under a sense of duty to the stockholders, and in obedience to his long desire to see the College flourish, without any private ill-feeling toward Gen'l Jones, to whom he still entertained the kindest feelings.

On the conclusion of President Davis' remarks, Mr. Calvert strenuously objected to the reception of the report.

A general discussion then begun, and was finally stopped by a motion of Professor Worthington, to proceed to an election of Trustees.

Mr. Davis said such an election could not take place, as there were only two vacancies, and they were caused by resignations.

After a general discussion on this point, the chair appointed tellers, and the meeting proceeded to the election of a Board of seven Trustees. There were two tickets presented, and the elected one was as follows: John F. Lee, 3,875 shares; Allen Dodge, 4,075; J. H. McHenry, 5,578; Ezra Whitman, 4,075; Charles B. Calvert, 3,775; E. L. F. Hardcastle, 5,675, and James T. Earle, 4,075.

The vote on the "Davis" or defeated ticket was: Wm. B. Sands, 1,903; W. W. Cochran and Edward Wilkins, each 1,703; A. Bowie Davis and Benjamin Hallowell, each 200.

After the transaction of some general business regarding the Professorships of the College, the meeting adjourned.

CORRECTION.—In the "Riverside Poultry Yard" advertisement of Bacon & Spinning, instead of Fairfax, county, it should read, Fairfield county, Conn.

Monthly Exhibition of the Maryland Horticultural Society.

The April Meeting and Exhibition of this Society was held on Wednesday, April 14th, at the Academy of Music, and was a decided success, both as to the display and the large attendance of members and visitors—an unusual interest was manifested by all concerned. The Committee of Arrangement deserve great credit for the artistic manner in which the display was made. The flowers and plants were arranged upon tables that extended across the two rooms with striking effect. This is regarded as the best monthly display made by the Society since their institution, and is calculated to advance the interest of horticulture and floriculture throughout the jurisdiction of the Society. The following are a review of the deposits of

FRUITS AND FLOWERS.

The President, Ezra Whitman, Esq., made an attractive display, conspicuous among which was a large orange tree, with eighteen or twenty beautiful oranges hanging from the branches. He also exhibited a cactus *jenkinsonia*, with 120 blossoms and buds upon it, which was greatly admired. In addition, Mr. Whitman displayed two handsome bouquets, pansies, fuchsias, asbutilons, petunias, a very variegated abutilon, a Victoria daisy (very large and rare), and a large amaryllis. Mr. F. Fauth, Jr., is gardener to Mr. Whitman.

Mr. R. W. L. Rasin, exhibited a large, rare and beautiful variety of flowers, ferns, &c., consisting of *calceolarias*, *lycopodiums* (five varieties and very fine), *selagenellas*, *phornium tenax variegata*, variegated *hibiscus*, from a cutting, four and one-half feet high; *sanchezia nobilis*, two varieties of *fittonia*, *caprosma bauerana variegata*, golden and silver ferns, *centoria*, *begonias* and a *colens chameleon*. Mr. Anderson is his gardener.

Mr. John Feast, Sr., florist, displayed a japonica tree with a great profusion of red flowers; also *xerorotus*, *primula amena*, *anthurium nibicord*, *pandanus veitche*, *arismea* (very rare) *pandanus utilis*, a beautiful heath, *begonias*, *macrophylla*, *auricoria*, *bidwellanna*, fine *ericas* and *japonicas*, with a number of other choice flowers, including double azalias, ferns and *dracenas*.

Mr. R. J. Halliday, florist, exhibited a hanging basket filled with growing flowers and plants, *calceolarias*, the old familiar Scotch thistle, an Arabian Desert plant and *phornium tenax*.

Mrs. Isabella Brown, through Mr. John Donn, her gardener, exhibited a choice collection, including *calceolarias*, azalias, *cinerarias*, *zonale geraniums* and *begonias*.

Andrew Patterson, florist, exhibited a great variety of roses (many of rare beauty), and *verbenas*, *fuchsias*, and *heliotrope*.

Mr. James Pentland, florist, exhibited single and variegated *geraniums* and *verbenas*.

August Hoen, Esq., presented a fine collection of *pansies* and *heliotrope*.

Mr. Wm. H. Perot exhibited azalias, *genista venosa*, *chamaeops* and *chanthus damperi*.

Mrs. Charles J. Baker offered a fine basket of Strawberries.

Mr. J. Howard McHenry exhibited a large and fine collection of *colens* and variegated *geraniums*.

Mrs. W. W. Spence exhibited *cinerarias*, azalias

—double white and double pinks—calceolarias and fern—lunaria gibba.

Mr. Thos. Fairley, florist, on Driud Hill avenue, exhibited a magnificent bouquet of Baltimore Buds, which were truly lovely, rivaling the celebrated Boston Buds.

During the afternoon his Hon. Mayor Vansant, visited the exhibition and was cordially received by the officers, and expressed great gratification at the fine display before him. Mr. Rasin presented him a splendid bouquet of Flowers—and Mrs. Charles J. Baker a basket of fine strawberries from her hot-house at Athol, which the Mayor acknowledged in his usual gallant and felicitous manner.

PROCEEDINGS OF THE MEETING.

The meeting was called to order at 8 o'clock in the Concert Hall of the Academy, by President Whitman, which was attended by a large number of the members and their friends. Secretary Dorsey read the proceedings of the last meeting, after which the premiums awarded by the committee, Messrs. J. Edward Feast, Henry Taylor and J. Mowton Saunders, were announced, as follows:

PREMIUMS.

To Professionals.—R. L. Halliday, first best 6 varieties of calceolarias, \$2; Mrs. Isabella Brown, through her gardener, Mr. Donn, second best 6 varieties of calceolarias, \$1; Andrew Patterson, first best 12 varieties of roses in pots, \$4; Andrew Patterson, first best 12 roses, cut blooms, \$3; James Pentland, first best 24 cut bloom panais, \$2; Ezra Whitman, through his gardener, F. Fauth, Jr., second best display of pansies, \$1; James Pentland, first best 12 varieties of verbenas in pots, \$2; Andrew Patterson, second best 12 varieties of verbenas in pots, \$1; Mrs. Isabella Brown, through her gardener, Mr. Donn, first best 6 distinct varieties of cinerarias, \$2; James Pentland, first best 12 zonale geraniums, \$3; Mrs. Isabella Brown, through her gardener, Mr. Donn, second best 12 zonale geraniums, \$5; James Pentland, first best 6 specimens of double geraniums, \$3; James Pentland, first best 6 specimens of variegated geraniums, \$3; and to John Feast, the best collection of greenhouse plants, \$5.

To Amateurs.—J. Howard McHenry, through his gardener, Mr. Tischner, first best variety of foliage geraniums, \$2; Ezra Whitman, through his gardener, F. Fauth, Jr., second best variety of foliage geraniums, \$1; R. W. L. Rasin, through his gardener, Mr. Anderson, first best variety of ferns, \$2; R. W. L. Rasin, through his gardener, Mr. Anderson, first best variety of lycopodiums, \$1; R. W. L. Rasin, first best variety of calceolarias, \$2; R. W. L. Rasin, first best 12 stove plants, \$5, and to Ezra Whitman, through his gardener F. Fauth, Jr., for best hand bouquets, \$1.

Special premiums to Charles J. Baker, through his gardener, Mr. Daniel Thuly, for two dishes of strawberries, \$2, and to Ezra Whitman, through his gardener, F. Fauth, Jr., for red cactus in bloom, \$2.

Honorable Mention.—C. A. Oakford, for display of azalias; Thomas Fairley, for best variegated geraniums, too late for competition; J. Ed. Feast, for fine display of ferns and dracaenas, and M. Perrine & Son, for display of flower pots and terra cotta ware.

The President here announced that the subject

to be discussed this evening was "Bedding Plants." Mr. Andrew Black had been appointed to open the discussion, but owing to sickness was not able to attend—whereupon Mr. John Feast, Sr., was introduced, and read an interesting paper, in which he alluded to the increased interest by the public of late years in the culture of Bedding Plants, giving a brief sketch of varieties adapted to cultivation in Maryland, with some general hints as to their propagation, &c.

Mr. Wm. D. Brackenridge then entertained the audience with a short address on the arrangement of bedding plants, so that the color of the flowers would blend—also a sketch of flower gardens he had visited, years ago, in Holland and Austria, where it was no uncommon thing to see large numbers of acres of flowers belonging to one florist.

Captain Snow then made a few general remarks, showing the influence of beautiful flowers among all classes of people, high and low, rich and poor.

Mr. Flitton among other things said: that the fancy-leaved varieties of geraniums were not as good for general culture in this climate, as some of the older kinds.

It was decided that "Orchids, or Air Plants" should be the subject for discussion at the May meeting, and Captain Snow appointed to open the discussion, a gentleman well qualified to perform the task, one who has the finest collection of orchids in this part of the country.

Sales of Blooded Stock.

We extract from the *Country Gentleman*, an epitome of several very creditable and extensive public sales of thoroughbred Short Horns, that have taken place recently in Illinois, Iowa and Missouri.

Messrs. C. C. Parks and W. B. Dodge, Esqs., had a joint sale, on the 7th inst., at Waukegan, Ill.

They sold 104 cows at an average of \$677.70—69,445 00
18 bulls and B. Calves, averaging \$284.44—5,120 00

Total, \$122 a head, averaging, \$611.19—\$74,565.00
COTSWOLD SHEEP.

They also sold 46 ewes, mostly lambs, at an average of \$20.60; and 7 bucks, different ages—average per head, \$32.

There was also a sale at Glen Flora, April 6th, of *Clydesdale* horses; prices ranged from \$1,100 to \$2,525 a head. Fourteen head of two year olds and over, brought \$12,080, an average of \$863 a head.

Messrs. Elliott and Kent, of De Moines, Iowa, sold on the 8th of April:

48 Short horn cows, average \$649.06, \$31,155
13 Bulls and B. Calves, average \$215.00, \$2,795

Average of \$556.56 per head for the 61 head, \$33,950
Messrs. J. H. Kissenger & Co., of Clarksville, Mo., sold at Dexter Park, April 9th,

37 cows and heifers, average, \$605.81, \$22,415
6 Bulls and B. calves, average, \$568.33, \$3,410

43 head, average, \$600.58, \$25,825

GRAND SUMMARY OF THE WEEK.

89 cows and heifers, average \$650.87. Total, \$123,015
37 bulls and B. calves, average \$306.08. Total, \$11,325

226 head \$594.42 \$134,340

Whilst there are no \$40,000 sales in the foregoing, the average prices obtained should satisfy these enterprising breeders, to whom the whole country is greatly indebted. The purchasers were mainly from the West and Southwest; but these fine animals are well scattered, and will rapidly swell the already great stock of the country, of these mammoth bovines.

New Publications Received.

THE TRANSACTIONS OF THE PENNSYLVANIA STATE AGRICULTURAL SOCIETY, for the year 1872-73. Vol. IX.—This is a well printed volume of highly important matter to the agriculturist. It is illustrated, but we regret to say, that the lithographs are not in keeping, either in style or finish, with the typography of the book. Among the premium Essays, are three from the pen of our associate editor, Mr. J. Wilkinson, on Farming Implements; on Causes of Failures of Crops and in Farming; and one on Liquid Manure, the Saving, Preparing and Applying the same, which is illustrated by drawings. These Essays are all carefully written, and reflect credit upon the author, evincing both scientific knowledge and practical experience.

UNITED STATES OFFICIAL POSTAL GUIDE—Containing an alphabetical list of all the Post Offices, money order offices, domestic and International; Chief Regulations of Departments, &c., revised and published quarterly, by authority of the Department. We have received from the publishers, H. O. Houghton & Co., Boston, a copy of this Guide. It contains all information needed by those who have business with post offices. Price, 50 cents each number, or \$1.50 per year.

Transactions of the Massachusetts' Horticultural Society, 1874, Part II. This work is highly creditable to that old and ably conducted Society, and contains much useful information.

Annual Report of the New Jersey State Agricultural Society, for 1874.—This Report is an unusually valuable one, and we shall make some extracts from it in a future number.

From J. H. Stickney, a description of the *Township System*, with a consideration of its advantages, addressed to the people of Maryland. It is an important and highly interesting Essay.

The Comic Monthly, New York.—It is really comical, and mirth exciting. An ingenious burlesque of the follies of the times.

Presented by the author, *Ropp's Ready Reckoner* and Commercial Calculator, with Grain, Stock, Lumber and Interest tables. This little work is highly commended as a useful Manual, and great help both to the farmer and mechanic.

The "AMERICAN ENGINEER"—Published monthly in Baltimore and Washington, by G. H. & W. T. Howard, comes to us this month, in its usual excellent typography, and increased from 12 to 16 pages. The Engineer is a good advertizing medium for all engaged in the Mechanical Art. The Messrs. Howard are doing a good business as Patent Agents, and are said to have obtained some patents of great value.

IMPORTED BERKSHIRE SOWS.—Charles S. Taylor, of Wynona Stock Farm, Burlington county, New Jersey, writes us:—"I received on the 21st April, at your port, per steamer Nova Scotian, four very fine Berkshire Sows, from Russell Swanwick, of the Royal Agricultural College Farm, England—two farrowed on the voyage, and ten pigs are now safely landed with the sows on my farm."

DEFERRED.—For want of space, the article on *Pears and their Cultivation*, by John Feast, Sr., was laid over for the June number.

Catalogues Received.

From Messrs. W. F. Massey & Co., Chestertown, Kent County, Md., their neat catalogue of Flowering Plants, Seeds, Small Fruits, Vegetables, Plants, &c.

From John Cook, Carroll, Baltimore County, Md., his catalogue of Plants, Fruits, Cut Flowers, Grape Vines, &c.

From W. & B. Douglas, Middletown, Conn., their catalogue and price-list of Pumps, Hydraulic Rams, Garden Engines, &c. It is the best gotten up we have seen of the kind, and fully illustrated. There are described and engraved several sorts of Pumps and Hydraulic Machines which are new to us.

From G. Westinghouse & Co., Schenectady, N. Y., their Circular and Price List of Improved Horse Powers, Threshing Machines, Clover Hullers, Wood Saws, &c.

From Thomas Jackson, 50 and 52 Vesey Street, New York, his Wholesale Price List of Nursery Stock for 1875.

New Advertisements.

Moro Phillips, Improved Super Phosphate, &c.
R. Balcazar, Genuine Peruvian Guano.
Great Western Gun Works, Shot Guns, Pistols, &c.
E. J. Evans & Co., Nurserymen and Seedsmen.
Health Department, Maryland Poudrette.
Andrew L. Black, Bedding Plants for Spring, 1875.
G. & N. Popplein, Jr., Popplein's Silicated Phosphate of Lime.

A. B. Morton & Sons, Importers of Bones and Bone Ash, &c.

James Cloud & Son, Thoroughbred Stock for Sale.

J. S. Stone, the New Grape Champion.

C. B. Moore, Importer and Breeder of Jersey Cattle, &c.

R. J. Baker & Co., Ground Bone, &c.

C. J. B. Mitchell, Cotswold Sheep.

W. A. Burpee, Brown Leghorns, &c.

Jos. M. Ludsburg, Patent Butter Prints.

Lawford & McKim, Farms wanted for Welchmen.

A. G. Mott, Agricultural and Horticultural Tools.

W. W. Giles, Well Auger and Drills.

THE AMERICAN POMOLOGICAL SOCIETY.—The President, Col. Wilder, gives notice that the meeting for 1875, is appointed for September 8th, 9th, and 10th, and will be held in accordance with the invitation of the Illinois State Horticultural Society at Chicago.

SALE OF JERSEY BULLS.—Col. J. Stricker Jenkins, Baltimore, Md., has sold the Jersey bull Calvert 1273, H. R. A. J. C. C., solid fawn, with black points, sire Fairfax 530, dam imp. Dortosa 1671, to Mr. Talbot J. Taylor, Cloud cap, Baltimore Co., Md.

COWS CALVING IN FALL.—Mr. E. J. Stockwell told the Deerfield Valley Farmer's Institute that he prefers to have his cows drop their calves in the fall and then feed well through the winter till grass is good in spring.

BALTIMORE MARKETS--April 27.

Prepared for the "Maryland Farmer" by GILLMORE & ROGERS, Produce Commission Merchants, 159 W. Pratt st.

[Unless when otherwise specified the prices are wholesale.]

ASHES.—Pots \$6.50@7.00.
 BEESWAX.—Firm—30@31 cts.
 BROOM CORN.—10@14 cts.
 COFFEE.—Active. Prices range from 17@20 cts. for ordinary to choice, gold duty paid.
 COTTON.—Market quiet—Ordinary, 14cts; Good Ordinary 15½ cts; Low Middling, 16 cts; Middling, 16½ cts; Good Middling, 16½ cts; Middling Fair, 16½ cts.
 EGGS.—Fresh lots—Md. and Pa., 14 @ 15 cts.

FERTILIZERS.—No change to note. We quote:
 Peruvian Guano.....\$66 ½ ton of 2000 lb.
 Turner's Excelsior..... 55 ½ ton "
 Turner's Ammo. S. Phos..... 45 ½ ton "
 E. F. Coe's Ammo. S. Phos..... 55 ½ ton "
 Rasin & Co., Soluble Sea Island Guano 50 ½ ton "
 Rasin & Co., Ground Bone and Meat..... "
 Rasin & Co., Ammonia, Potash and Bone Phosphate of Lime..... "
 Flour of Bone..... 60 ½ ton "
 John Bullock & Sons Pure G'd Bone.. 45 ½ ton "
 Whitman's phosphate..... 50 ½ ton "
 Bone Dust..... 45 ½ ton "
 Dissolved Bones..... 60 ½ ton "
 Missouri Bone Meal..... 47 ½ ton "
 New Jersey Ground Bone..... 40 ½ ton "
 Moro Phillips' Super-Phosphate Lime 50 ½ ton "
 "A A" Mexican Guano..... 30 ½ ton "
 "A" do do..... 30 ½ ton "
 Plaster.....\$1.75 ½ bbl.

FRUITS DRIED.—Cherries, 22@24 cents; Blackberries, 9@9½ cts; Whortleberries, 16 cts; Raspberries, 28@29 cts; Peaches, peeled, bright, 23@27 cts; Peaches, unpeeled, halves, 8@8½ cts; Peaches, unpeeled, quarters, 6½@7½ cts; Apples, sliced, bright, 9 @ 10½ cts; Apples, quarters, bright, 7@7½ cts.

FLOUR.—Market Active.—Super \$4.25@4.75; Extra 5 00 @5.25; Western Family 6.00@6.50; Choice family, \$8.25@ \$8.50.

GRAIN.—Wheat—Good demand, fair to choice, white, 1.35 @1.40, fair to choice, red 1.30@1.35. Corn—Southern, white, 87@90—Yellow do 87@88—Western mixed 89 cts. Oats—68@75 cts.

HAY AND STRAW.—Timothy Hay, firm, at \$21.50@ \$22 per ton; Rye Straw \$13@14; Oat Straw 14@15; Wheat straw \$12.00@13.00.

HIDES.—Dull—Green 9@10 cts.; Dry salted 13@14 cts.; Dry Flint 15@17 cents.

PROVISIONS.—Bacon Shoulders, 9½@10 cts.; Clear Rib Sides, 12½@13½ cts.; S. C. Hams, 15@16cts.

POTATOES.—Early Rose 2.75@3.00 per Barrel.

RICE.—Carolina and Louisiana, 7½@7½ cts.

SALT.—Ground Alum \$1.15@1.25; Fine \$2.10@2 20 per sack; Turks Island 35@40 cts. per bushel.

WHISKEY.—\$1.13@1.15 per gallon.

\$25 Per Day guaranteed using our **Well Auger** and Drills. Catalogue free. W.W.GILES, St. Louis, Mo.

\$100 per Month Paid to Good Agents. m6t

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BEDDING PLANTS for Spring of 1875.

A Large and select stock of all that is RARE and otherwise—among which are the following:

GERANIUMS—Double, Zonale, Tricolor, golden and silver—Golden Bronze, Ivy-leaved, Sweet scented, Pelargoniums— Heliotrope— Bouvardias, Fuchsias— Caladiums— Carnations— Colens— Dahlias— Gladiolus— Verbenas— Tuberose— Smilax— Roses.

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PURE AYRSHIRE CATTLE AND CALVES.

Pure Jersey Cattle and Calves,

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of all ages. "Unsurpassed" These Pure-Bred Pigs have no superior on this continent. Bred from our prize and premium stock. Also, extra improved BERKSHIRE and ESSEX FIGS. Order soon.

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TWO GRAND GOLD MEDALS,

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For "Slow and easy movement of horses, 15 rods less than 1½ miles per hour, Mechanical Construction of the very best kind, thorough and conscientious workmanship and material in every place, nothing slighted, excellent work, &c," as shown by Official Report of Judges. Threshers, Separators, Fanning Mills, Wood Saws, Seed Sowers and Planters, all of the best in Market. Catalogue with price, full information, and Judges Report of Auburn Trial, sent free. Address:

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 Sold by **L. CLARK, Muncie, Ind.** ap-2t

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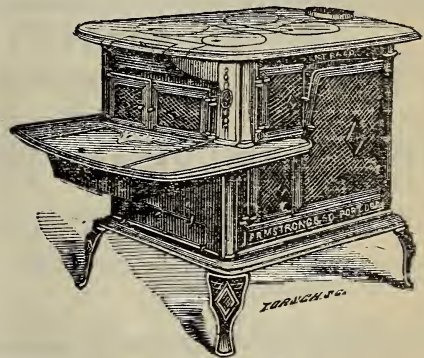
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Ammoniated Bone Super-Phosphate.

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Soluble Phosphate of Lime.....	23.91
Bone Phosphate of Lime.....	3.15

Composed of the most concentrated materials, it is richer in Ammonia and Soluble Phosphates than any other Fertilizer sold, and is made with same care and supervision as our EXCELSIOR, its only competitor; uniform quality guaranteed; fine and dry; in excellent order for drilling. Packed in bags.

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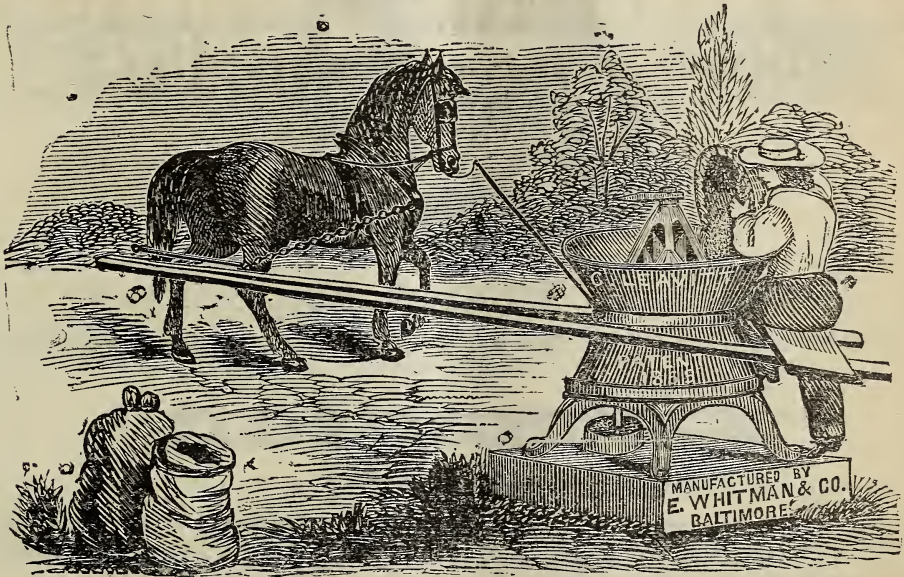
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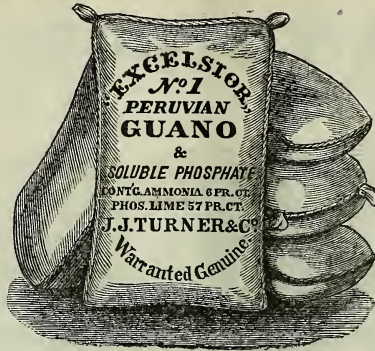
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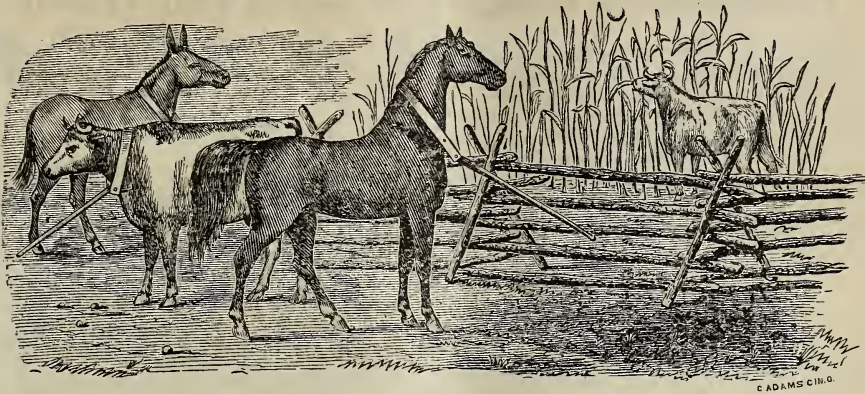
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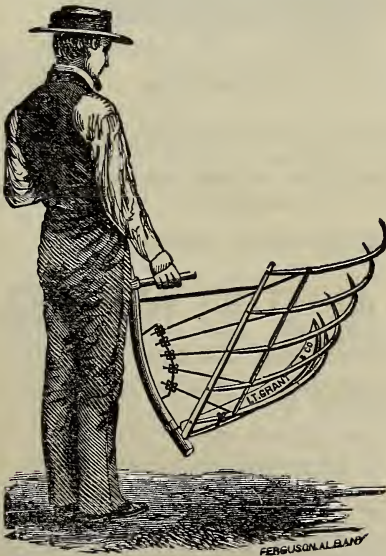
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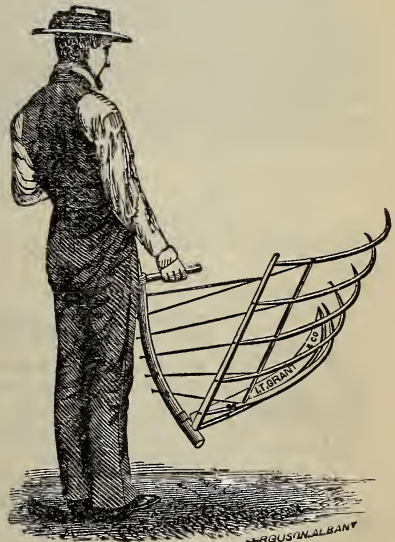
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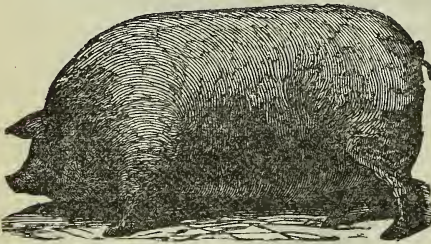
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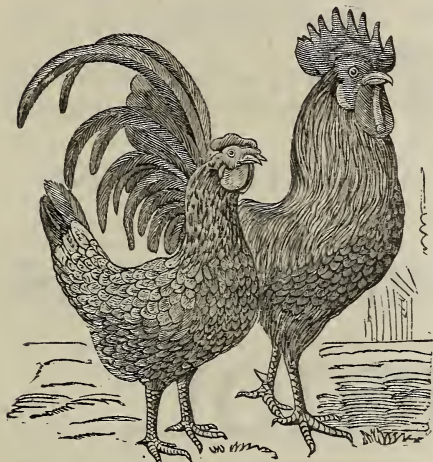
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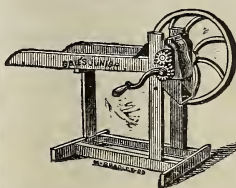
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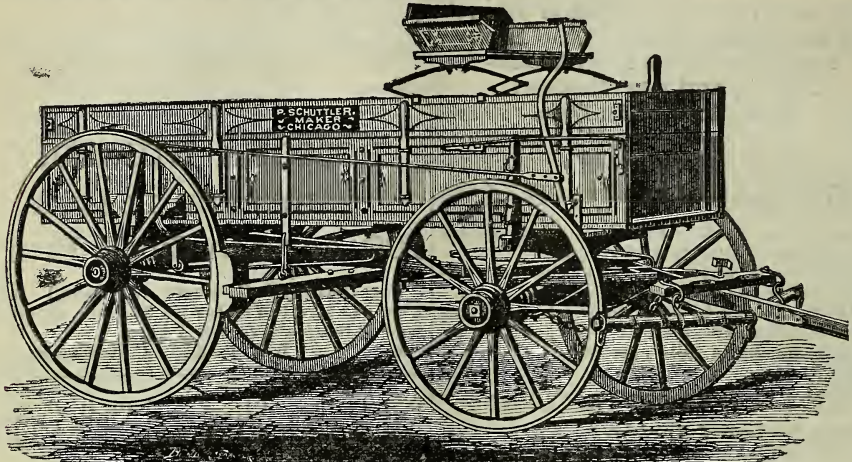
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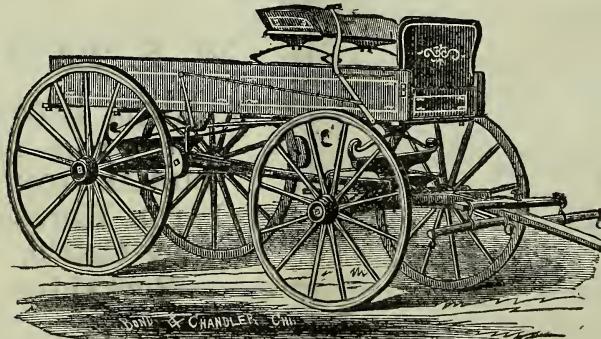
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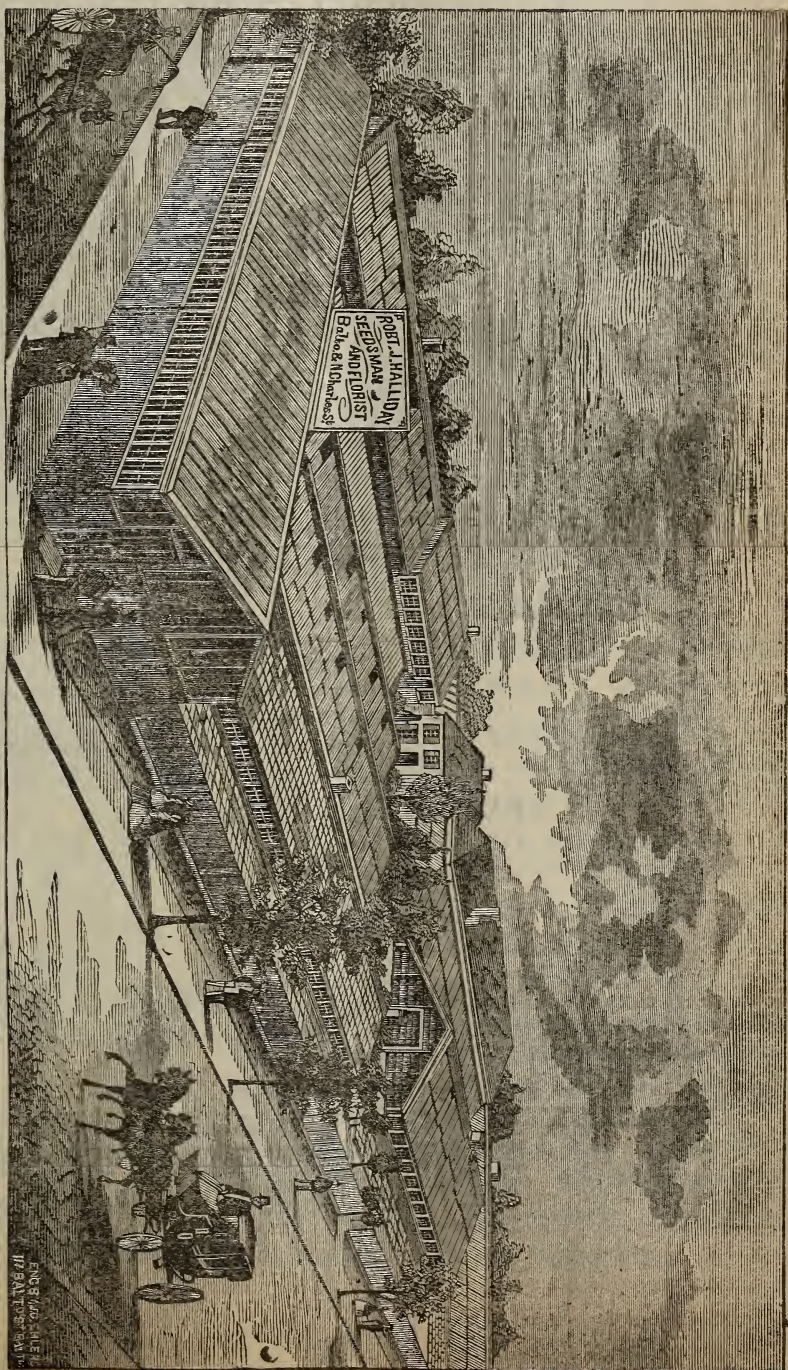
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Established 1837.

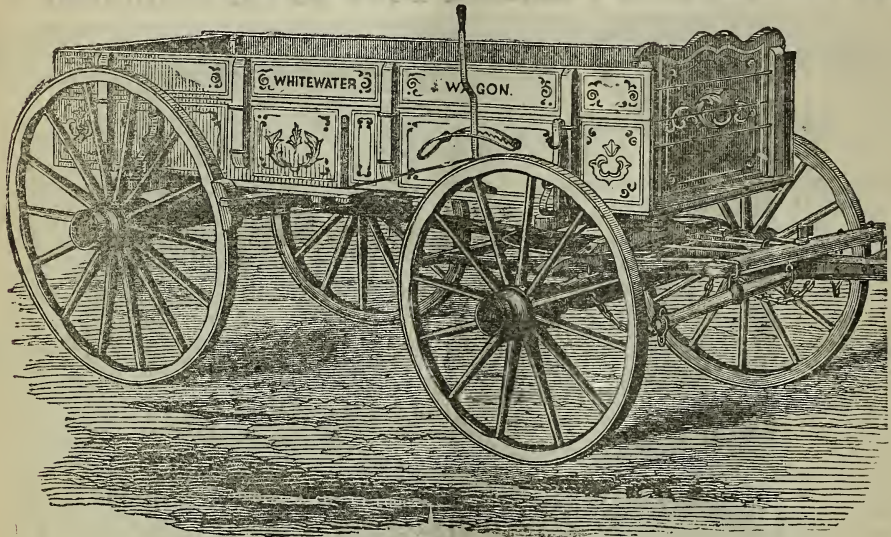
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WHITMAN'S FARM AND FREIGHT WAGONS.



THIMBLE SKEIN.

				<i>Capacity.</i>
3 inch	Thimble Skein,	Light 2 Horse\$115 00—	2500 lbs.
3 1/4 "	"	" Medium 2 Horse	.....120 00—	3000 lbs.
3 1/2 "	"	" Heavy 2 Horse	.....127 50—	4000 lbs.
3 3/4 "	"	" 3 or 4 Horse	.....132 50—	5000 lbs.
3 1/2 "	"	" for 4 Horses, with stiff tongue,		
	pole and stretcher chains	.....	142 50—	5000 lbs.

The above are complete with whiffletrees, neck yoke, bed and top box, stay chains, &c.

IRON AXLE WAGONS.

1 1/2 inch	Iron Axle,	Light 2 Horse	.....\$120 00—	2300 lbs.
1 3/4 "	"	" Medium 2 Horse	.....125 00—	2800 lbs.
1 1/2 "	"	" Heavy 2 Horse	.....132 50—	3500 lbs.
2 "	"	" for 4 Horses, with stiff tongue,		
	pole and stretcher chains	.....	150 00—	5000 lbs.
2 1/2 "	"	" " " " " "	170 00—	7000 lbs.

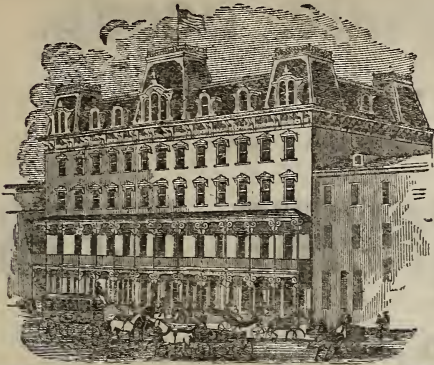
The above are complete, with whiffletrees, neck yoke, bed and top box, stay chains, &c. Brakes and Seats furnished for either the Thimble Skein or Iron Axle Wagons at the following additional cost, viz:

Spring Seat, (with 2 steel springs) \$6. Patent Brakes, \$4. Lock Chain, \$1.

EVERY WAGON WARRANTED.

E. WHITMAN & SONS,

Nos. 145 & 147 W. Pratt Street,
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C. R. HOGAN, Proprietor.

Capacity 350 Guests.

Has just received a series of Costly and Elegant Improvements, embracing every Department of the Hotel, having been Remodeled, Enlarged and Newly Furnished throughout thereby supplying a want long felt by the traveling public, a "FIRST CLASS HOTEL," at the very moderate price of \$2.50 per day.

There is attached to the Hotel the most Elegant and extensive RESTAURANT in the city, thereby enabling persons to engage Rooms and live on the European plan, if so desired.
Jan-ly

THOMAS M. HARVEY,

West Grove, Chester County, Pa.

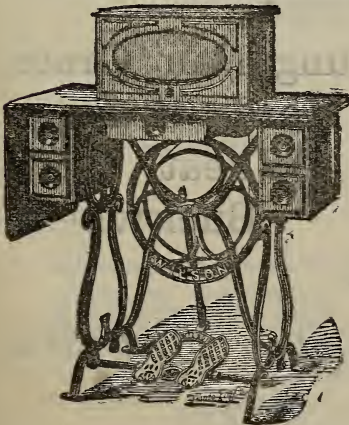
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PURE GUERNSEY, ALDERNEY, AND JERSEY.

Also, Yorkshire and Berkshire Pigs, and Dark Brahma Chickens,
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AGENTS WANTED.



THE WILSON RECEIVED
THE
SILVER PRIZE MEDAL AND
DIPLOMA OF HONOR.
AT
VIENNA, AUSTRIA.

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WE ARE PREPARED to OFFER
EXTRAORDINARY INDUCE-
MENTS to SMART, ENERGET-
IC MEN AND WOMEN WHO
ARE OUT OF EMPLOYMENT,
TO ENGAGE IN THE SALE OF
the WORLD-RENOWNED WIL-
SON SHUTTLE SEWING MA-
CHINES, in UNOCCUPIED TER-
RITORY. For further Particu-
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MACHINE CO., NEW YORK,
PHILADELPHIA, BOS-
TON, CHICAGO, SAINT
LOUIS, NEW ORLEANS,
OR CLEVELAND, OHIO.

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THE LARGEST AND MOST COMPLETE ASSORTMENT OF

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Ever offered in Baltimore.

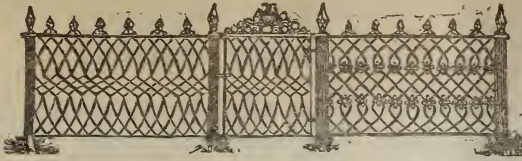
EMBRACING ALL THE NEWEST AND MOST APPROVED VARIETIES OF THIS COUNTRY
AND OF EUROPE.

WE HAVE LAID IN AN UNUSUALLY LARGE STOCK OF GARDEN SEEDS,
AND ALSO OFFER AN ASSORTMENT NEVER EQUALLED IN
BALTIMORE OF

Seed Potatoes, Millet,
Clover, White Clover,
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Orchard Grass, Lucerne,
Rye Grass, Hungarian Grass,
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 &c., &c., &c.

*Prices as Low as those of any other First-Class
Seed House.*

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**WIRE RAILING
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No. 36 North Howard Street, Baltimore, Md.

MANUFACTURE

Wire Railing for Cemeteries, Balconies, &c.

SIEVES, FENDERS, CAGES, SAND & COAL SCREENS, WOVEN WIRE, &c.
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ESTABLISHED 1811.

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Fine Silverware and Rich Jewelry,

IMPORTER AND DEALER IN

**WATCHES, DIAMONDS & NEW BRONZES,
TREBLE SILVER-PLATED WARE OF NEW DESIGNS,
TABLE CUTLERY, &c., &c.**

Our Silverware, made on the premises, and of the Finest Standard Silver, all of which we offer at the lowest prices, at

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No. 135 W. Baltimore St., near Calvert St., Baltimore.

MARYLAND POUDRETTE,

Rich in Phosphates, Ammonia and other Alkaline Salts,

AS PER ANALYSIS, containing in one ton of 2,000 pounds, say

34 pounds Ammonia,

39 pounds Potash,

38 pounds Phosphoric Acid,

Also, LIME, MAGNESIA, and other valuable constituents in smaller quantities.—

For sale, packed in barrels or bags, at \$15 per ton, 2,000 pounds, by

HEALTH DEPARTMENT,

28 Holliday street, Baltimore.

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100,000 PEACH TREES,

BESIDES A VARIED AND GENERAL ASSORTMENT OF

OTHER NURSERY STOCK,

For sale very low, at Middletown Nursery and Fruit Farm.

For Descriptive Catalogue and Price List—free—address

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159 FRONT STREET, NEW YORK.

Notice to Cotton, Wheat and Tobacco Planters.

Twenty-four years trial in America and England—we offer you

LISTER'S STANDARD FERTILIZERS,

Not to be excelled by any Manufacturers.

Lister's Standard Bone Superphosphate of Lime,

Guaranteed to be Cheaper than the best Phosphate in the market,
and up to the analysis represented.

Lister's Celebrated Bone Dust—Bone Meal—and
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SAMUEL TOWNSEND & SON,

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
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**NURSERYMEN AND SEEDSMEN,
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A complete assortment of Standard and Dwarf FRUIT TREES, SHADE and ORNAMENTAL TREES, EVERGREENS, Hardy Ornamental and Climbing SHRUBS, GRAPES, SMALL FRUITS, HEDGE PLANTS, &c.

Garden and Flower Seeds, Grass Seeds, Seed Potatoes, Seed Corn, Oats, Wheat, Hedge Seeds, &c., and HORTICULTURAL GOODS of all kinds.

 Descriptive Catalogues and price lists mailed to applicants.

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**SMITH, DIXON & CO.,
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PAPER AND MACHINE MADE
PAPER BAGS,

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R. SINCLAIR & CO.

MANUFACTURERS OF

AGRICULTURAL IMPLEMENTS AND MACHINERY,

ALSO, GROWERS AND IMPORTERS OF

GARDEN AND FIELD SEEDS,

Dealers in Fruit Trees and Plants.

Would call the special attention of our friends and customers, to the following first-class Machinery and Implements, which we guarantee to be equal to any article of the kind made in this Country, being all of our own Manufacture.

We name in part, such Machines as are required by the Farmer and Planter for the Winter and Spring Seasons, viz: **SINCLAIR'S PATENT MASTICATOR**, of which we make four sizes, viz: Hand, Steam and Horse Power.

Sinclair's Patent Screw Propeller Hay Straw & Fodder Cutters,

of which we make four sizes, viz: Light Hand Power, Hand Power, several sizes, and Horse Power three sizes. All of the above-named Cutters are our own Patents and Manufacture, and are such as we can recommend.

Reading's Patent Horse-Power Corn Sheller, with Fan Attachment.
Sheller, plain.

Double Spout Hand or Power Sheller. Single Spout Shellors—all kinds.
Corn and Cob Mills, Grist Mills, for Farm and Plantation use. WHEAT AND CORN FANNING MILLS.

"Anderson's" Agricultural Steamer, for preparing feed for Stock The best in use.
Threshers and Separators—different kinds and sizes.

Horse Powers, all sizes and patterns.

Ox Yokes and Bows, Horse Power Road Scrapers, Hay and Straw Presses.

Plows, different kinds and sizes, Harrows, Cultivators, and all kinds of Farming and Horticultural Tools.

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CELEBRATED CLOTHIERS,

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Announce the introduction of a plan of ordering

CLOTHING AND UNDERWEAR BY LETTER,

To which they call your special attention. They will send on application their improved and accurate **RULES FOR SELF-MEASUREMENT**, and a full line of samples from their immense stock of

Cloths, Cassimeres, Coatings, Shirts, &c., &c.

A large and well-assorted stock of **READY-MADE CLOTHING** always on hand, together with a full line of **FURNISHING GOODS**.

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Manufacturers and Dealers in Men's and Boys' Clothing and Furnishing Goods, either Ready-Made or Made to Order.

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OPPOSITE BARNUM'S HOTEL, Baltimore,
IMPORTER,
HATS, FURS, UMBRELLAS.
WM. W. PRETZMAN. (s-ly) G. E. S. LANSDOWNE.

CHARLES B. MOORE,
IMPORTER, BREEDER AND SHIPPER OF
JERSEY CATTLE, BERKSHIRE AND YORKSHIRE PIGS,
Bred from Imported and Prize-Winning Stock.
ORDERS SOLICITED AND SATISFACTION GUARANTEED.

Glendale Farm, Christiana, Lancaster County, Pa.
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F. J. KINNEY,
BREEDER OF
BROWN LEGHORN FOWLS,
ORIGINATOR AND BREEDER OF
WORCESTER COUNTY FOWLS.
Eggs for Hatching and Fowls for Sale
AT FAIR PRICES.

P. O. Address, Olean Street,
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[YARDS AT TATNUCK.]

I claim to have bred Brown Leghorn Fowls as long as any person in America, and to have the LARGEST WHITE EAR-LOBE Stock there is now in the world. Am breeding them at Buffalo, N. Y., for my western trade, and at several other places beside my Home Yards. Have over 2000 Thorough Bred Chicks.

I also offer to beat with said Brown Leghorns any other breed of fowls in the world—laying eggs, or for early poultry. They are non-sitters. Have taken 1st and special premiums at all the exhibitions I have attended this season. Am breeding from three 1st premium Cocks and Cockerels, and several 2d and 3d premiums. Have SOLD NO PREMIUM birds. I MAKE A SPECIALTY OF

STRAWBERRIES, GRAPES & CURRANTS,

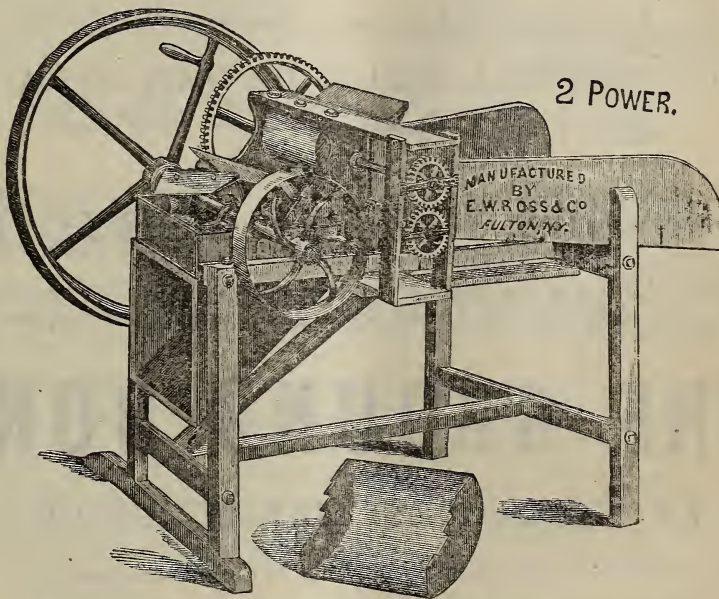
and have several acres under cultivation—have taken first premiums at the Worcester County Horticultural Society's annual exhibition, for largest and best collections Strawberries, five years in succession, and have sold Strawberries grown out of doors at a higher price per quart than any other man in the State. I also offer a limited number of Plants of my new seedling Strawberry, Kinney's No. 10. I have tested the No. 10 thoroughly, fruiting one acre the past season, and shall set 5 acres for next season. It is by far the most profitable Market Strawberry I am acquainted with. Is a seedling of Wilson crossed on Jucunda. Is a better berry in every respect than the Wilson, and nearly two weeks later. Is just what we have all been watching for. It does remarkably well in all soils where it has been tried. As hardy as Wilson, is stronger in growth, and as productive.

I shall sell a limited number of plants in the spring of 1875, at \$3 per dozen, \$20 per hundred, and \$100 per thousand.

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THE CUMING'S IMPROVED FEED CUTTER.

The Only Perfect Machines
FOR CUTTING HAY, STRAW, STALKS,
AND ALL KINDS OF FODDER.



We make Six Sizes, with capacity from 500 lbs. to 3 tons per hour.

The CUMING'S CUTTERS are fifteen years ahead of all other makes. Fifteen years ago they were what other cutters are now, that is, geared cutters. The Cuming's are not geared, receiving the power direct upon the knives.

The No. 1 has three knives, all other sizes four.

The machines are made from the choicest material and perfectly finished, and are well known in the North and West, and can now be had in all the principal cities and towns of Pennsylvania, Maryland and the South. Send for circulars to

E. W. ROSS & CO., Sole Manufacturers,
decly *Fulton, Oswego Co., N. Y.*

PURE BONE DUST!

BONE DUST!

PURE BONE DUST!

TO THE CONSUMER AS WELL AS THE TRADE GENERALLY.

We have now completed

OUR NEW FACTORY,

and with the addition of the latest and most approved machinery are enabled at the shortest notice to furnish in large or small quantities, our

PURE GROUND BONE,

AT THE LOWEST MARKET PRICE.

An experience of more than thirty years in the manufacture of a

SUPERIOR ARTICLE,

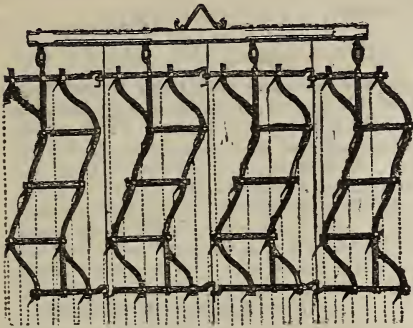
(from crude stock gathered daily from the Butchers in this market, with whom we have yearly contracts,) coupled with the fact of our inability, as to former seasons, of filling all orders sent to us, has demonstrated the advisability of our making a considerable outlay so as to meet demands upon us, and think we are now situated to please all that may favor us with a call. Thankful for past favors we hope in the future to merit a continuance of the same.

Respectfully,

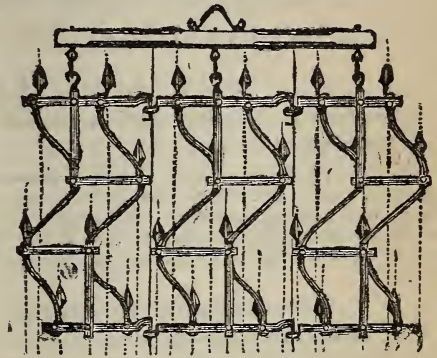
JOHN BULLOCK & SON,

61 S. Gay Street, Baltimore, Md.

Nothing Succeeds like Success, based upon
Real Merit.



HARROW.



CULTIVATOR.

COLTON'S

All Iron and Steel

HARROWS & CULTIVATORS

Were never advertise and pushed for sale at distant markets, until five years experience and use among home and near-by buyers had demonstrated them to be beyond question

Pre-eminently Superior in Quality of Work and in Durability.

Within the last three years the demand has wonderfully increased and sales have been made to parties at all points between the Gulf of Mexico and St. Lawrence and the far West. During the past Summer and Fall another factory was erected and a duplicate set of machinery placed therein, the original set having been especially designed for making our implements. Since the first of December both establishments have been running on full time and will turn out during 1875 at least

6,000 All Iron and Steel Harrows and Cultivators,

THE MATERIAL FOR THAT NUMBER BEING ON HAND.

All things fairly considered these implements are the cheapest a farmer or planter can buy and will prove the most satisfactory in freedom from expenses for repairs; *there is not a particle of cast or malleable iron about either, the material being entirely wrought iron and steel.*

During the seven years of manufacture over 25,000 of Colton's All Iron and Steel Harrows and Cultivators have been sold; since the Spring of 1872, over 2,000 have been sold in New York.

This success is absolutely unapproached by any other Harrow and Cultivator on this Continent. Our Harrows have met in practical field trial with every competing implement of any general or even local reputation in Canada and New York AND WERE NEVER YET BEATEN UNDER ANY CIRCUMSTANCES WHATEVER AT A PUBLIC FIELD TRIAL; the Cultivator being a newer implement has not had many opportunities of competing practically but in the few instances where tried with others has been victorious each and every time.

[over]

COLTON'S HARROWS AND CULTIVATORS.

I am fully convinced that their general introduction would be of vast benefit to the farmers of the State.

Prof. ROBERTS, Cornell, Dec. 22d, 1874.

As pertinent to statements made on preceeding page the following are appended.

The Oneonta Manufacturing Company are our agents in Otsego Co., N. Y., but before "taking hold" and making themselves responsible for the worth of a new implement they made an exhaustive test which in part shows WHY our harrow is superior :

Oneonta, Otsego Co., May 6th, 1873.

R. P. COLTON—Dear Sir :—In a trial of your all Iron and Steel Harrow we have proved the following facts to our entire satisfaction.

1st. It will do as much good work in one day as any ordinary harrow will in two days.

2d. On uneven ground it will on account of its self adjusting qualities do better work than can possibly be done by other harrows.

3d. The draft of your Harrow is lighter than most plows used on the same land ; tested by a Fairbanks Dynamometer the average draft was 310 lbs.

4th. Its Strength is very great. We drew it 20 rods and back over a sod field thickly imbedded with small and large stones ; the harrow loosened all it went over, cleared itself of every one and sustained no damage not even a tooth being bent or loosened Signed by

D. W. FORD, Sec'y Oneonta M'fg. Co.

E. C. HODGE, Invent, Hodge's Reversible Plow.

O. HOUGHTALING, Farmer, and several others.

The following is specially printed for the benefit of agents and dealers.

Onondaga Hill, N. Y. June, 8th, 1874.

L. W. JOHNSTON,—Dear Sir :—In the Fall of 1873 we took the agency of Colton's All Iron and Steel Harrows and Cultivators, selling about a dozen that season ; this Spring we have sold over Six Dozen.

Among our customers are : Davis Cossitt Esq., Sheriff of this County, John Greenway, Esq., the great Brewer and extensive Farmer, A. B. Avery, Prest. Onondaga Co. Milk Association, G. Spaulding, Esq., E. Makyes, Prest. Farmers Club and Fairs of Geddes, Onondaga and Lafayette Townships, and others equally well known and respected hereabouts. Our farmers talk highly of the merits of both implements, and we have never had any returned when left on trial with promise of being bought if satisfactory and superior in working.

STACKHOUSE & RAYNOR.

Our implements were never known or heard of in the district where the above were sold, by Messrs. Stackhouse & Raynor, until they took hold of the business as stated.

PRICES.

The retail prices of Colton's All Iron and Steel Harrows and Cultivators will be as follows :

Harrows in 3 sections, 30 teeth, 6 ft spread,	\$22 50
" " 4 " " 40 " " "	30.00
" " 5 " " 50 " 10 " "	37.50
Cultivators in 3 sections, 24 teeth, 6ft spread,	32.00
Extra Cultivator, sections each,	10.00
" Harrow, " " "	7.00

IN COMPARING COST of "ALL IRON AND STEEL HARROWS" with common wooden ones, REMEMBER that our 3 section harrow, will actually do as much work in a day as the best Scotch frame or 36 toothed square harrow, and the same power required to draw these latter will work our 4 section implement, which is WARRANTED to harrow 15 to 17 acres once over in the ordinary day's work of a man and team, WITH DRAFT NO GREATER than a two-horse plow in same land.

Our Cultivators are cheaper than any others of same width and work, while BOTH IMPLEMENTS ARE ABOVE COMPARISON AS TO DURABILITY ; the material in all being entirely wrought iron and steel.

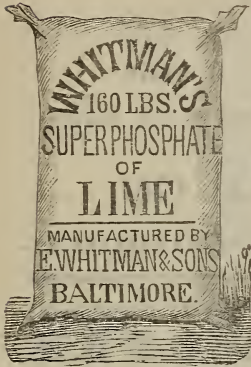
Manufactured and Warranted by R. P. COLTON.

E. WHITMAN & SONS,

BALTIMORE, MD.

Wholesale Agents at Manufacturers' Lowest Prices, for Maryland and the South.

PURE FERTILIZERS.



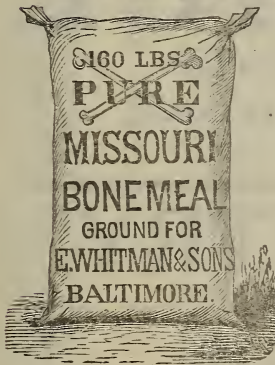
WHITMAN'S SUPER-PHOSPHATE OF LIME,

Manufactured only by E. WHITMAN & SONS,
IS THE
MOST RELIABLE PHOSPHATE IN THE MARKET.

Price \$50 Per Ton, in Sacks, of 160 pounds each.

MISSOURI BONE MEAL.

Its Superior an Impossibility.



Analysis : Ammonia..... 4.38
 Bone Phosphate of Lime.....49.51

Which is the highest analysis yielded by pure bone. The largest particles are smaller than timothy seed.

Price \$48 Per Ton, in Sacks of 160 lbs. each.

CAUTION !

As some parties are offering as Missouri Bone Meal other than the genuine article, we caution all persons that none is genuine unless the bags are branded as shown in the accompanying cut. Our Trade Mark is copyrighted, and we take the entire production of the Mill, and all infringements upon our copyright will be prosecuted to the full extent of the law. This article is perfectly pure, and has made a reputation for excellence never equaled by any Bone offered in this market. We do not claim that Bones ground in Missouri are any better than others, but we do claim that the Bone ground by our Mill is perfectly pure, and in unusually fine condition. "Missouri Bone Meal" is a name that we gave to designate this particular article; and to keep other dealers from palming off their goods upon those desiring the genuine Missouri Bone Meal, we have had our Trade Mark copyrighted.

New Jersey Ground Bone.

PRICE \$40 PER TON.

We have sold hundreds of tons of this Bone, and it has invariably given satisfaction. Peruvian Guano, South Carolina Bone (fine ground or dissolved,) Plaster, Sulphuric Acid, Potash, Sulphate of Soda, Nitrate of Soda, and all kinds of Fertilizer materials always on hand and for sale at the lowest market prices.

E. WHITMAN & SONS,

Dealers in Agricultural Implements and Garden Seeds,

145 & 147 W. PRATT ST., Baltimore, Md.

Bone Flour & Bone Dust

ANALYSIS:

AMMONIA, 4.37

BONE PHOSPHATE OF LIME, 44.56

Ground by ourselves, and warranted pure. Superior to any offered in this market.
Packed in good, strong bags. Price \$43 per ton.

J. J. TURNER & CO.

42 Pratt Street, Baltimore.

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WM. STUART SYMINGTON.

THOS. A. SYMINGTON.

PATAPSCO CHEMICAL WORKS.

SYMINGTON BROS. & CO.

MANUFACTURERS OF

OIL VITRIOL

AND OTHER CHEMICALS.

Works on Locust Point, }
Office, 44 South Street, } **BALTIMORE.**

Feb-1y

CHOICE POULTRY.

MAKE A SPECIALTY OF

Light Brahmas, Black Cochins,

Buff Cochins, and Sebright Bantams,

And can also furnish most of the varieties of

PURE BRED FOWLS, DUCKS AND TURKIES,

At very low prices for pure bloods. Have a large stock Light Brahmas on hand, and can fill orders in any quantities with No. 1 birds.

Satisfaction given. No Circulars, but gladly write any information.

Prices usually from \$4 to \$5 each—some *very extra* birds a little higher. Prices include boxing, &c.

A few **BERKSHIRE SWINE**, same stock as stock 1st Prize at Connecticut State Agricultural Exhibition last September. Extra fine specimens \$10 each at 8 weeks old.

C. P. NETTLETON,

nov-1y

Box 530, Birmingham, Connecticut.